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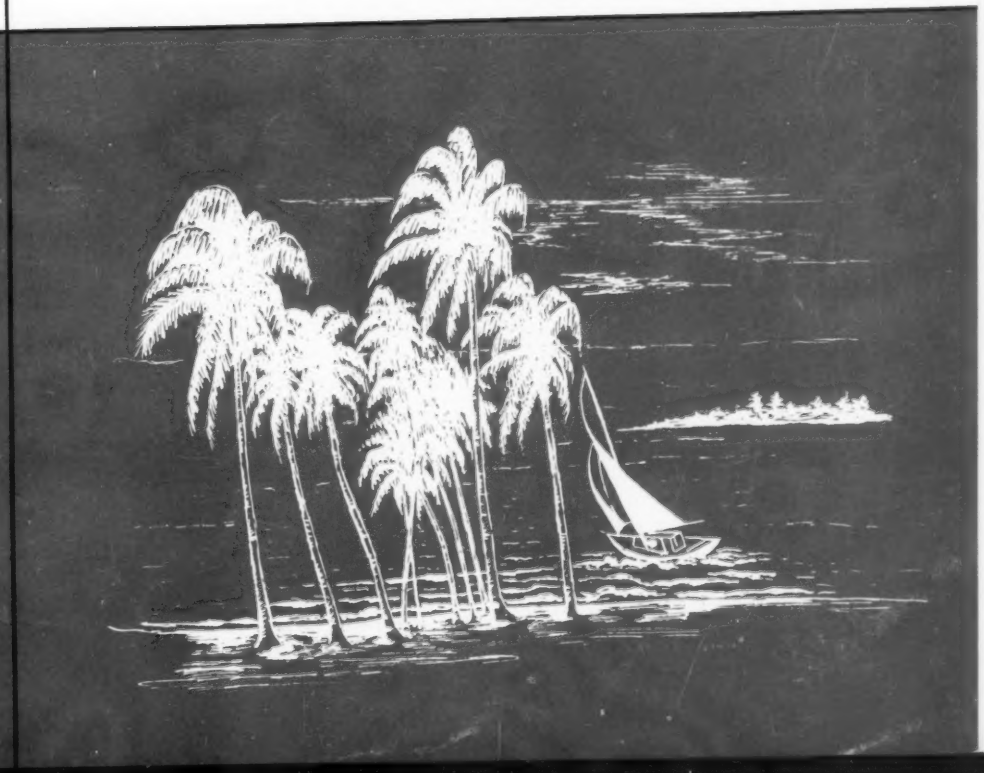

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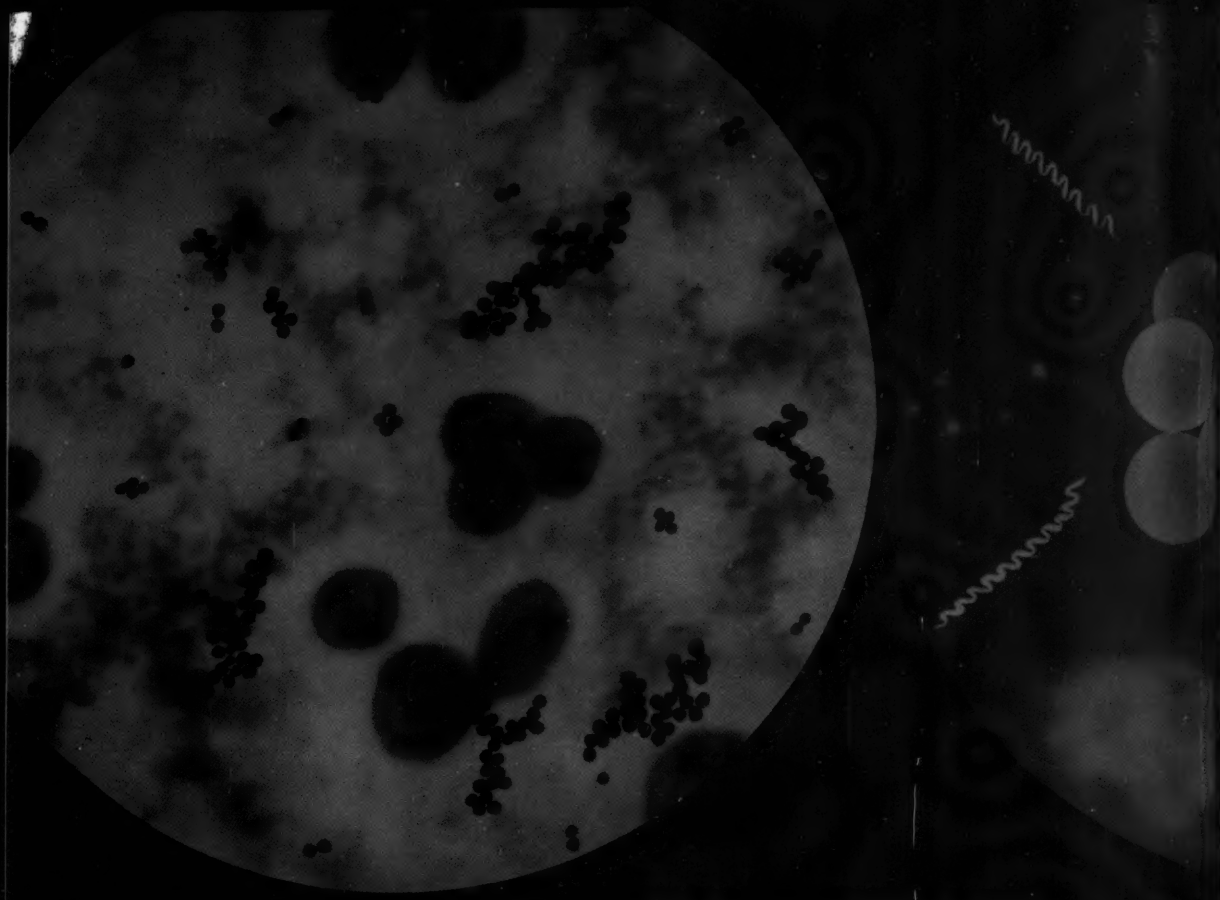
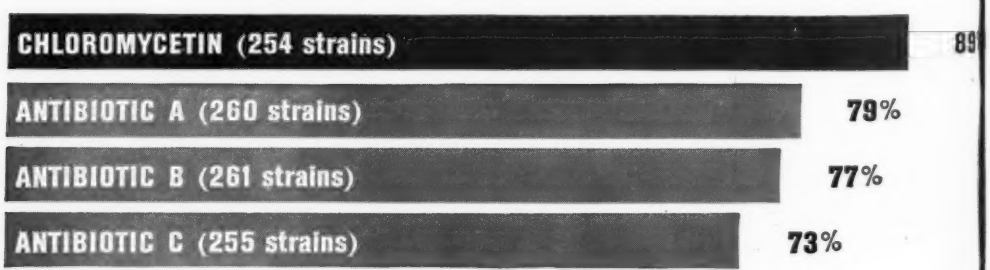


TRUE BROAD-SPECTRUM COVERAGE ...PROVED CLINICAL EFFICAC

In the struggle against sepsis, CHLOROMYCETIN — effective "...against most bacteria, Rickett Treponema, and some viruses..."[1] — has proved a dependable weapon in a variety of infections.

"Over 90 per cent of staphylococci isolated from infections in most institutions are relatively sensiti to chloramphenicol."[2] In a study of a significant number of gram-negative organisms it was fou that CHLOROMYCETIN was more effective in *in vitro* sensitivity tests than were other widely us broad-spectrum antibiotics.[3] Moreover, through the years, the incidence of strains of bacte resistant to CHLOROMYCETIN has remained virtually constant and strikingly low.[4-7]

IN VITRO SENSITIVITY OF GRAM-POSITIVE ORGANISMS TO CHLOROMYCETIN A TO THREE OTHER BROAD-SPECTRUM ANTIBIOTICS*



*Adapted from Leming & Flanigan.[3]

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Experimental and Clinical Use Of Intravenous Fibrinolysin Therapy

PAUL W. BOYLES, M.D.
MIAMI

Fibrinolysin is a naturally occurring enzyme of the blood. It is normally present in an inactive form called profibrinolysin, which can be activated by several different agents, including streptokinase. Injections of purified streptokinase induce a fibrinolytic mechanism in man which dissolves fibrin clots.[1] Systemic reactions, however, such as chills, fever, and shock occur following the administration of streptokinase. Inhibitors in the circulating blood against streptokinase may be responsible for the systemic reactions.

Intravenous infusion of active fibrinolysin is another method for inducing fibrinolytic activity. Technical advances in the purification of human profibrinolysin, which is activated with relatively small amounts of streptokinase, provide a preparation of active fibrinolysin. The objective evaluation of intravenous fibrinolysin therapy on experimental blood clots and preliminary application in patients with thromboembolic diseases is presented in this paper.

Methods

Radio-opaque blood clots were produced in leg veins and in coronary arteries of dogs by methods which I have previously described.[2-4] The fate of the clots was determined by serial x-ray examinations in both control and treated animals.

Results

1. IN VIVO EFFECTS OF INTRAVENOUS FIBRINOLYSIN.—The effects of a rapid infusion of human fibrinolysin on the various coagulation tests are illustrated in figure 1. The most striking effects are reduction of prothrombin consumption and fibrinogen and an increase in fibrinolytic activity. These changes usually revert back to normal within 24 hours in the average dog.

2. EFFECTS OF INTRAVENOUS FIBRINOLYSIN THERAPY ON RADIO-OPAQUE CLOTS.—Radio-opaque blood clots were produced in the leg veins of dogs by injecting a mixture of thromboplastin and radio-opaque material into a temporarily occluded vein segment. The fate of the resulting radio-opaque clot was subsequently determined by x-ray examination. The x-ray appearance of such a clot is presented in figure 2. Intravenous administration of a single injection of 200,000 units of fibrinolysin dissolved these clots in seven dogs within 24 hours, whereas the control clots required a period of from five to seven days to dissolve.

A similar technic was used to produce radio-opaque coronary thrombi in dogs. Intravenous fibrinolysin therapy in doses between 400,000 and 1,350,000 units given within one-half to one hour after the formation of the clots did not significantly accelerate the lysis of these clots. X-rays from one treated dog are illustrated in figure 3. The coronary thrombi in both the control and treated animals dissolved in six to 10 days after the formation of the clot. More recent experiments have indicated a rapid lysis for these coronary thrombi by administering fibrinolysin into the root of the aorta during the diastolic phase of the cardiac cycle.

From the Coagulation Research Laboratory, Miami Heart Institute, and the Department of Medicine, University of Miami School of Medicine.

Read before the Florida Medical Association, Eighty-Fifth Annual Meeting, Bal Harbour, Miami Beach, May 5, 1959.

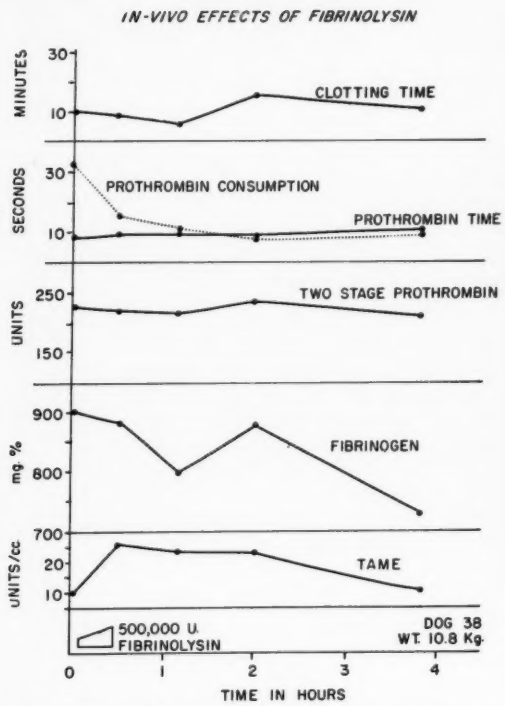

Fig. 1.—Effect of intravenous fibrinolysin administration on the various coagulation factors.

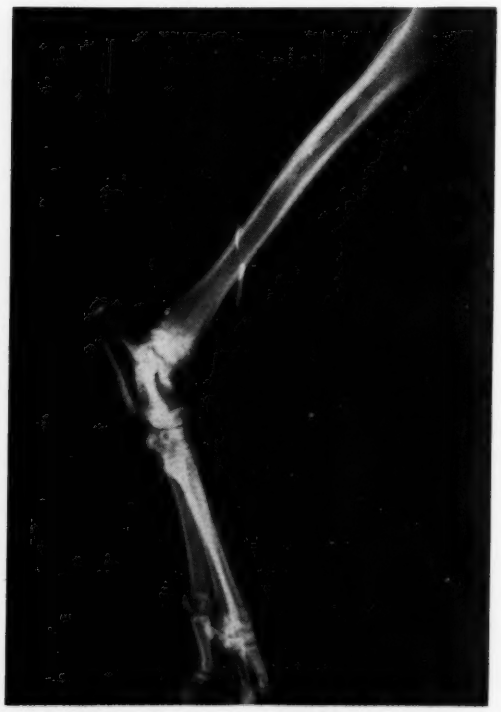

Fig. 2.—X-ray of radio-opaque blood clot in dog vein one hour after clot formation and prior to the systemic injection of fibrinolysin.

Fig. 3.—Serial x-rays from a dog with a radio-opaque coronary thrombus: (A) at the time of surgery, (B) one hour after clot formation and prior to the infusion of fibrinolysin, (C) two hours after the fibrinolysin therapy, and (D) four hours after the fibrinolysin therapy.

3. PRELIMINARY OBSERVATIONS OF INTRAVENOUS FIBRINOLYSIN THERAPY IN PATIENTS.—In 11 patients with various thrombotic episodes 19 infusions were administered in doses between 100,000 and 300,000 units dissolved in 200 ml. of 5 per cent dextrose and saline. In four of these patients treatment was started within 72 hours after the onset of symptoms. In these patients there was good clinical evidence that the occluded vessels became patent within 24 hours after therapy was instituted. In three patients who were treated later than three days after the onset of symptoms, no significant clinical improvement was noted. The remaining four patients died shortly after therapy was started, and the response could not be evaluated. Concurrent anticoagulant therapy was used in all but one patient. In no instance was hemorrhage noted. Fifty per cent of the patients exhibited some type of systemic reaction. The most common reactions were chills and fever. In one patient hypotension developed after the first infusion, which required treatment, and subsequent studies revealed the presence of antibodies in his blood against both streptokinase and fibrinolysin.[5] A transient erythematous rash developed in one patient on the sixth day after starting therapy. The effects of the repeated injections of fibrinolysin in this patient are il-

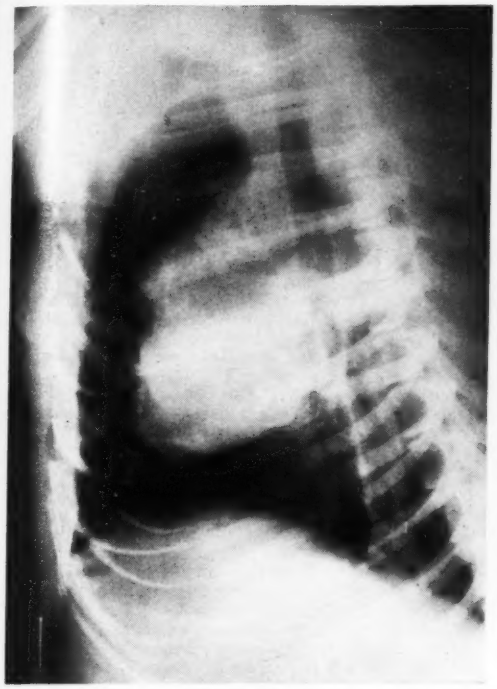

Figure 3(B).

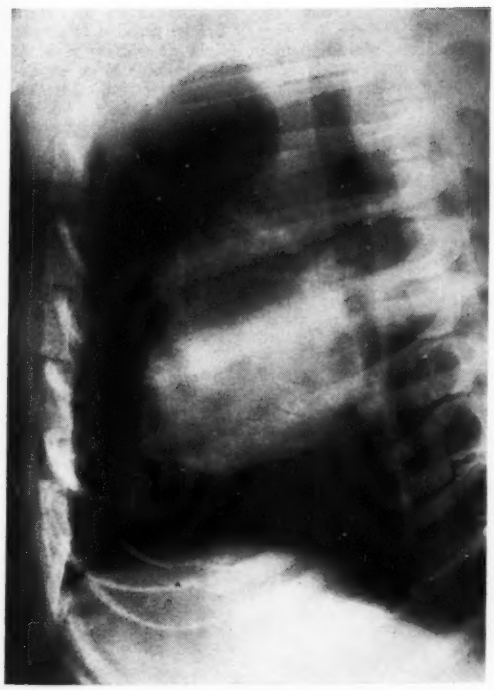

Figure 3(C).

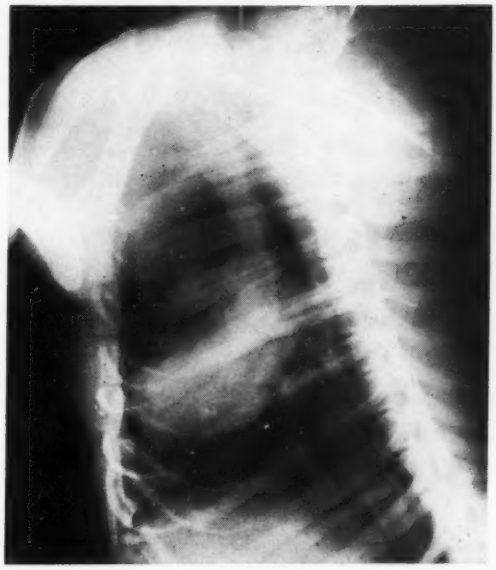

Figure 3(D).

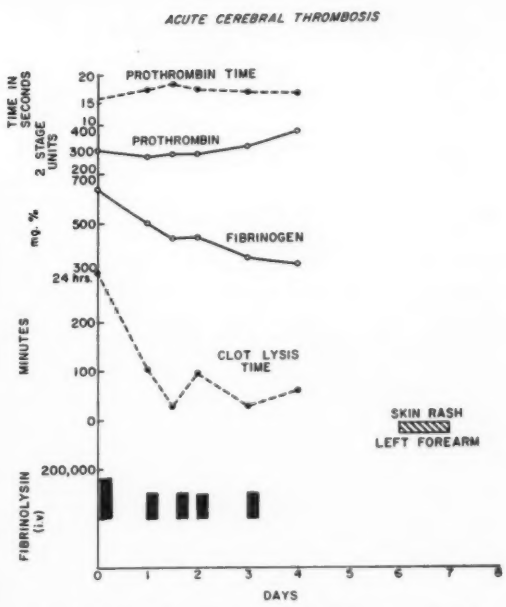

Fig. 4.—Serial blood studies of a patient treated with five intravenous infusions of human fibrinolysin.

lustrated in figure 4. The most striking changes were elevation in the circulating level of fibrinolytic activity, and decrease in the level of fibrinogen. These systemic reactions have decreased by prolonging the time of the infusion from 30 minutes to four hours. No attempt was

made to ameliorate these reactions with antipyretics or antihistamines, which would probably reduce the incidence of systemic effects.

Summary

Intravenous fibrinolysin therapy is effective in dissolving venous blood clots. Arterial thrombi are effectively treated with segmental injection of interarterial fibrinolysin. Preliminary observations in patients are encouraging when fibrinolysin therapy is initiated within three days after the onset of symptoms. Systemic reactions have occurred rather frequently after rapid infusions and less frequently after slow, prolonged intravenous administration. The systemic reactions, which in many respects are similar to those encountered with streptokinase, emphasize the need for further study.

Human Fibrinolysin (Actase) used in these studies was supplied by Drs. Singher and Chapple, Ortho Research Foundation, Raritan, N. J.

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University of Miami School of Medicine.

Discussion

DR. GEORGE T. HARRELL, Gainesville: The treatment of thrombosis of blood vessels is a problem of prime importance to Florida physicians. The increasing age of our population makes our people more susceptible to the development of clots in the vessels. The frequency of venous involvement, particularly peripheral thrombophlebitis, has been well recognized for years. The danger in venous thrombi lies in the pulmonary emboli which frequently follow and often are fatal. In Florida arterial thrombi also present a particularly difficult and frequent therapeutic problem. In the case of peripheral occlusion a surgical approach can be made, but in the more frequent coronary and cerebral thromboses few effective measures have been devised. Dr. Boyles' experience parallels that of others in that venous thromboses are more readily attacked than are arterial ones.

In attempting to evaluate data in any new therapeutic approach one must first be familiar with the natural history of the disease. The results reported reflect the collateral circulation which is available. The large number of anastomoses between veins give ready access by the enzyme to the clots. The meager collateral circulation in the coronary and cerebral arterial systems is the reason for the use of intra-arterial injections in these areas. In the normal course of events thrombi will begin to recanalize. I wonder if Dr. Boyles has made sections of his control animals to see if the clots have dissolved at eight days or whether they have organized and begun to form a new channel. The age of the clot is apparently a factor of prime importance in anticipating a favorable result. The experience of Dr. Boyles parallels that of others; little effect is achieved if treatment is started after the third day. The experiments in animals cannot be extrapolated to the treatment of many cases in human beings. Very rarely does the physician see the patient within one hour after the formation of the acute clot, and the difficulty in diagnosis of a thrombus this early in the course of the disease is familiar to us all. The experience of all workers in this field indicates that acute thrombi lyse more readily than do chronic ones.

Various investigators have used a series of lytic agents. Some years ago in another state we tried early preparations of trypsin of animal origin, but found the material relatively ineffective and its use was accompanied by rather severe side reactions. Streptokinase has been used as a lysing enzyme. This material is also derived from a foreign source; in many persons antibodies to it develop as a result of repeated streptococcal infections. The rash as well as the more severe reactions with chills, drop in blood pressure and other evidence of anaphylactic phenomena are undoubtedly the result of antigen-antibody reactions in the blood. On theoretic grounds fibrinolysin should be the preparation of choice. The material can be derived from either human or bovine serums. In spite of the fact that the human material should not contain foreign antibodies, reactions have occurred in 50 per cent of human patients after its use, and the experience of Dr. Boyles parallels that of others. Should better means of processing be found to reduce these side reactions, it still may not be possible to obtain as much material of human origin as necessary. It is fortunate that a bovine source is available since experience with antiserums in infectious diseases indicates that this species produces relatively few reactions. An excellent review of research methods for studies in this field has recently been published (Annals New York Academy of Science 68:97, 1957.)

The experiments reported by Dr. Boyles indicate the need for dependable laboratory determination of clotting factors in order to control therapy. The recommendation that anticoagulant therapy be simultaneously administered is in keeping with the conclusions of other workers in the field. The difficulty in achieving an effective concentration of enzyme at the site as shown by the animal experiments has wisely led Dr. Boyles not to attempt treatment of coronary thrombosis in human beings at this time.

It should most forceably be pointed out that this paper demonstrates well that good research with an experimental approach can be accomplished by a physician who is primarily in private practice.

Some Common Orthopedic Problems In Industry

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BOSTON, MASS.

Just 25 years ago, I had the privilege of spending a year at the Riverside Hospital in Jacksonville under the tutelage of Dr. Edward Jelks and the late Dr. Harry A. Peyton. This was during the depression, and in Florida there was no tourist trade to speak of; there was little if any industry; and the economy of the state was almost entirely agricultural. Since that time, the tremendous growth of Florida with the influx of industry of all types has served to convert much of the economy from an agricultural to an industrial one. Thus many, if not most, physicians of this state now have some contact with industrial medical problems, either in the treatment of employees as private patients or in providing medical services of various types to industry on some sort of a regular arrangement basis.

Since I was advised that the majority of this audience either specializes in or has a special interest in Orthopedics and/or Trauma, it seemed appropriate for me to select subjects in this field, though not being an orthopedist myself, I approached the assignment with some trepidation. I thought, however, that you might be interested in a few problems with which the Medical Department of a large industry is periodically or regularly confronted.

Knee Injuries

Injuries of the knee can present difficulties both from the point of determining compensation liability and in rehabilitation. Since the knee joint is supported by a good capsule and reasonably strong ligaments, one would expect a fair amount of stress to be necessary to produce semilunar cartilage injury—that is, a sudden forced twisting movement of the knee with the foot fixed, such as occurs in a fall while skiing, for example. It is true that in most instances a definite history of suddenly unusual trauma is obtained. This is not always the case, however, as can be attested by anyone who sees knee injuries of this type in any volume.

Most of our Telephone Plant craftsmen do some climbing as a part of their regular duties. Also when installing phones or running and repairing cable, they may work in a squatting position for varying periods of time. It is surprising how frequently we see cases of internal derangement of the knee, allegedly incurred merely in stepping to the ground from the bottom rung of a ladder or arising from a squatting position without any history of definite or recognized twist, slip, fall, or other untoward incident. Furthermore, the patients almost always are young men in their twenties or early thirties with good general muscular development.

In the absence of any apparent unusual event occurring during the work operation, the question always arises as to whether this is or is not an industrial and compensable condition. If subsequent investigation discloses no history or record of prior knee injury, and most of them do not, the case usually is accepted as a new injury arising out of and during the course of employment. This acceptance results in great unhappiness among the safety and accident prevention people since they believe they are being charged with a lost time accident when, in their eyes at least, there actually was no accident, and they usually blame the industrial physician for this additional blot on their safety record.

The problem in rehabilitation of knee injuries relates almost exclusively to the nonindustrial case. The industrial injury almost always comes to the prompt attention of the plant physician, who either institutes treatment himself or directs the patient to the care of an orthopedist. The nonindustrial patient, however, usually is treated during the acute phase by his personal physician and ordinarily is not seen at the plant Medical Department until anywhere from two to several weeks later for evaluation of ability to return to work. By this time the joint effusion has sub-

Medical Director, New England Telephone and Telegraph Company, and Associate Clinical Professor of Occupational Medicine, Harvard University.

Read before the Florida Association of Industrial and Railway Surgeons and the Florida Orthopedic Society, Bal Harbour, Miami Beach, May 2, 1959.

sided, the ligaments have healed, and if the semilunar cartilage has not been injured, the knee itself has returned to an essentially normal state. The patient, however, is still disabled because of atrophy and weakness of the quadriceps group. As you all know, measurable loss of tone of this muscle group has been demonstrated as early as six hours following trauma to the knee joint, apparently as the result of unfavorable reflex stimuli from the site of injury. In our experience it is rare indeed for the physician other than an orthopedist or surgeon commonly dealing with trauma to pay much attention to the quadriceps. Consequently, quadriceps setting exercises usually are not introduced so that with immobilization of the knee, the atrophy and loss of tone rapidly progress, and of course subsequent walking or standing fails to provide much exercise for the quadriceps group. Neither does heat, massage, or passive manipulation accomplish anything substantial in the restoration of tone and muscle mass. Consequently, in this type of case active muscle setting exercises against resistance must be undertaken, but since they have been started many weeks too late, the disability for work is unnecessarily prolonged.

Cervical Radiculitis

Another condition that I should like to discuss for a few moments is that of cervical radiculitis secondary to degenerative changes in the cervical spine and the relative frequency with which it is unrecognized. Symptoms, of course, vary from patient to patient, but they are sufficient to produce disability for work in a substantial number of cases.

When symptoms occur in the cervical region, ordinarily no diagnostic problem is involved since failure to respond quickly to local heat and analgesics usually results in an x-ray of the cervical region being obtained and the diagnosis established. As with many other types of inflammatory processes, however, pain may be referred to areas other than the site of the lesion—in this instance, to the upper extremity. In many cases, even with referred pain, a careful history and examination will immediately lead one to suspect the proper diagnosis. The burning character of the pain, its intensification at night as a result of the reclining position, and the presence of sensory disturbances in one or more fingers are common and are typical of this condition.

In our experience, however, there are a substantial number of cases in which pain is referred to and symptomatically limited to the shoulder area. Here one is apt to consider the condition as subacromial or subdeltoid bursitis and treat the patient accordingly, of course, with failure to respond and with prolongation of symptoms and disability.

Figure 1.

The patient whose x-ray is shown in figure 1 is a 51 year old executive. In 1951 at age 43, he experienced pain localized to the right shoulder which was diagnosed by his personal physician as bursitis. He was treated by local heat to the shoulder and shoulder exercises. The symptoms persisted for several months, but finally cleared.

In the fall of 1953 the shoulder pain recurred, and again he was treated with local heat to the shoulder. This was ineffective, and he was referred by his personal physician to a neurosurgeon for consultation. His history as subsequently obtained indicated that the neurosurgeon told him he might have a "cervical rib," but he obtained no x-rays and prescribed no treatment. Some six weeks after onset, the pain became sufficiently severe so as to disable him for work for two weeks. At the end of that time he voluntarily came to our Medical Department prior to a contemplated return to work.

X-rays of the cervical spine revealed degenerative changes with considerable narrowing be-

tween C6 and C7. Clinically at that time he had excellent range of shoulder motion and only slight limitation of cervical mobility on left lateral bending. Since his home was approximately 100 miles from Boston and since he was anxious to go home for the weekend, he was given a cervical traction apparatus and instructed to apply it continuously in bed for a 24 hour period, using from 6 to 8 pounds of traction. Three days later, after the weekend, he returned having obtained considerable relief and having been able to discontinue codeine that he had been taking. He then was given a Forrester collar to wear during the day and instructed to use the traction while sleeping. On this regimen he was able to discontinue all medication, even aspirin, within a five day period.

Although he remained comfortable, he consulted us again some two months later because his wife had noted some fibrillations of the muscles of the right upper arm. At that time we recommended cervical myelography primarily to rule out any possibility of a cord tumor. This was done, and while a cord tumor was ruled out, the myelograms definitely showed a disk herniation. He was not operated upon, but continued with the use of the collar and night traction for several months. For approximately the last four years he has used neither and has remained symptom-free.

The patient whose x-ray is shown in figure 2 is a 54 year old executive first seen in August 1953 because of pain in the right arm of three weeks' duration without a history of injury or other known precipitating cause and without a history of previous similar difficulty. Although he had no cervical symptoms, cervical motions were limited, and on questioning he complained of some paresthesias in the right hand and fingers.

His x-rays revealed much degenerative change, as shown in figure 2, with considerable narrowing of the space between C6 and C7, especially in the posterior portion.

He was given 15 pounds of cervical traction for 20 minutes on five successive days with complete relief at the end of that time. Three weeks later his symptoms recurred and again were relieved with four treatments. He then was symptom-free for two years. In 1956 his symptoms recurred briefly following a virus infection and again were promptly relieved by traction.

The x-ray in figure 3 was taken as a follow-up on the occasion of a visit to the Medical Department in October 1958 for an unrelated con-

Figure 2.

Figure 3.

Figure 4.

dition. The degenerative process has changed little in the five year interim, and he has continued symptom-free.

Although cervical radiculitis perhaps is not as frequent as the acute and chronic types of subdeltoid bursitis, failure to recognize it when it is present is unfortunate since it can be promptly relieved in most instances by the judicious use of cervical traction whereas treating it as a bursitis results in needless prolongation of discomfort and of disability. For several years now it has been our routine always to include x-ray of the cervical spine whenever ordering shoulder films or vice versa in any patient when the correct diagnosis is not immediately evident on the basis of objective clinical findings.

Congenital Anomalies of the Lower Spine

The "industrial back" is a hardy perennial in the field of industrial medicine. Volumes have been written on it. Among industrial injuries it continues to occupy a place high on the list of the costs of doing business, and it probably is safe to say that no other single condition provokes more head scratching, promotes more litigation, and consumes more time on the part of the industrial physician, the attorney, the insurance carrier, and the compensation commission, than does this one syndrome. Because psychic as well as organic factors can be involved and because organic pain can be present without demonstrable organic abnormality, the low back continues to vex us.

In that complete or permanent relief from any form of treatment is uncertain in so many cases, much industrial effort over the years has been devoted to ways and means of prevention. Safety programs, including instruction of workmen in proper methods of lifting and the provision of power lifts for the heavier types of work operations, have served to lessen the incidence of low back injuries to some extent. In recent times much attention also has been given to methods of selection and proper placement of the workman himself—to avoid putting a boy on a man's job, so to speak—for it seems reasonable to assume that the person with significant structural or functional impairments of the back will be more susceptible to injury from a given amount of stress upon his back than will someone without such impairments. It therefore follows that a program of careful pre-employment or preplacement medical examination will serve to detect many such potential accident hazards, and such a program does accomplish much.

A physical examination by itself, however, will not detect the many bony defects that may exist. Consequently, for the sake of a more complete examination and evaluation, many industries have embarked upon programs of x-ray of the lower back as a routine in the preplacement medical examination of applicants for jobs requiring reasonably heavy physical effort. Rather than contributing to a solution, this procedure in some respects seems to have compounded the problem. Particularly, I refer to the matter of congenital anomalies and their importance or unimportance. This has been and continues to be a moot subject. There are of course certain congenital defects, perhaps better termed abnormalities rather than anomalies, in the presence of which heavy physical work probably should not be undertaken.

Figure 4, for example, illustrates a case of spondylolisthesis. One would almost certainly conclude that this represents a distinct hazard for back injury. There is a large defect in the posterior elements of L4 with anterior displacement of L5 on the sacrum. There also is an exaggerated lumbar lordosis. At the time of examination, this young man was 17 years of age and

was applying for summer work in our cable forces, one of the heaviest types of work of all of our plant crafts. We did not think that he should be medically recommended for such an assignment.

Other similarly pronounced congenital abnormalities which we consider to be disqualifying for heavy work are listed in table 1.

Table 1.—Congenital Anomalies

Disqualifying conditions for heavy work

1. Transitional fifth lumbar vertebra
2. Unilateral articulation of transverse process with sacrum
3. Extensive spina bifida occulta
4. Spondylolisthesis
5. Prespondylolisthesis (defect of pars interarticularis

A greater problem of decision presents itself in the case of the less dramatic anomalies such as variations in articular facet structure, minor spina bifida occulta, extra lumbar vertebra, enlarged lumbar transverse processes, et cetera. In the case of the articular facets, some orthopedists believe that significant variations result in an unstable back, thus predisposing one to low back strain. Conversely, others believe that they are of no importance. Many radiologists do not even comment upon such anomalies when examining a film and usually report such film as normal unless they have been specifically requested in advance to look for and comment upon the facet structure. For a time we believed that facets were unimportant as long as they were symmetric at the same level, but that if they faced differently at the same level, this position would predispose to instability. We since have changed our opinion.

More often than not, congenital anomalies of the lower spine are apt to be multiple.

In the applicant whose x-ray is shown in figure 5, the facets between L4 and L5 face obliquely on the right and transversely on the left. Between L5 and the sacrum, they face transversely on the right and anteroposteriorly on the left. In addition, the left transverse process of L5 is large and articulates with the sacrum, whereas the right is of normal size.

In another young man, incomplete closure of the neural arches of L5 and of the first sacral segment is demonstrated roentgenographically in figure 6. In addition, there is a large winglike transverse process of L5 on the left which articulates with the sacrum and with some bone reaction evident.

Figure 5.

Figure 6.

Both of these examinations were made in 1953 when the Company was hiring substantial numbers of young men for plant craft assignments and when we had just instituted low back x-rays as a routine in preplacement examinations conducted at the Company's Boston Medical Office. At that time our medical recommendation was unfavorable for both applicants with regard to undertaking heavy work. Today, we probably would recommend the first medically, but would not modify our original opinion on the second, chiefly because of the bone reaction about the articulation of the enlarged transverse process.

As nearly as I have been able to determine, these lesser congenital anomalies of the lower spine do or do not constitute a predisposition to back injury depending upon whom one consults. In the absence of any conclusive studies one way or the other on the subject, such divergent opinions seem to be the result of individual personal experiences and convictions.

Special Study

Employees of the Bell System by no means are immune to back injuries. Some of the Operating Companies have programs of routine low back x-ray examination as a part of the preemployment medical procedure; others do not. In 1955, a Medical Committee which I had the honor to chair, was appointed to study the back injury problem within the Bell System as a whole. To obtain a sufficiently large number of cases, the study covered the experience over a three year period. By means of a special questionnaire, certain basic data were obtained on each individual occurrence during this period in which either disability or job modification because of the injury (disability assignment) resulted.

Seventeen hundred and thirty-nine occurrences of such industrial back injuries of all types and at all spinal levels were collected. The total number of industrial injuries of all types for this same period was 6,517, so that back injuries represented 26.6 per cent of the total injuries sustained.

As one segment of this over-all study, it was hoped that an analysis of this group of cases would permit some definite conclusions to be drawn concerning the significance of congenital anomalies as a predisposition to low back strain. For example, an attempt was made to correlate the experience of those companies having a preplacement back x-ray program with those which did not. It soon became apparent, however, that correlation was impossible because of the presence of so many variables such as rate of hire, labor turnover, number of transfers from one job assignment to another, and number of employees in each company without back injuries, some of whom had had pre-employment back x-rays and some of whom had not. The Committee, therefore, as an alternative, studied the results from the aspect of severity rather than frequency since this was measurable and reasonably comparable.

For this purpose, all cases not preventable by any type of pre-employment examination were excluded, such as the fractures, contusions and abrasions, and multiple injuries. There was left a residue of 1,106 cases in which low back strain was diagnosed. This group then was separated into three divisions according to postinjury x-ray findings only, as follows:

1. Normal x-ray findings after injury.
2. X-ray findings after injury which might or might not have been present at the time of employment. This group consisted chiefly of cases of arthritis, other disease processes and narrowing of the fifth lumbar interspace and included 134 cases labelled as herniated disk suspects.
3. X-ray findings after injury revealing only congenital anomalies.

These three divisions or groupings then were compared on the basis of average days of disability and average costs per case.

Figure 7 compares the average number of days of disability per case. In the group with normal back x-rays the average was 21 days, while in the group with the congenital anomalies the average length of disability was 36 days. The average period of disability for the middle group was 67 days.

Figure 8 compares the costs. The cases of low back strain with normal back x-rays averaged $565 per case. The cases with x-rays revealing diseased processes and/or narrowing of the fifth interspace averaged $1,248 per case. The cases of low back strain, however, in which x-rays revealed only congenital anomalies resulted in an average cost of $1,440 per case, or more than two and one-half times that of the cases with normal back x-rays.

This Committee's study therefore developed nothing to indicate that the person with congenital anomalies of the lower spine is more susceptible to low back strain than is one with normal x-ray findings. It did, however, seem to show that if a person with such congenital anomalies sustains

a low back strain, the disability will be of longer duration and the costs greater.

Other approaches to the problem also have been made along the lines of what might best be described as a random sampling technic. This has consisted of obtaining low back x-rays on a series of persons with a history of chronic backache or reporting for treatment of symptoms of backache while at the same time obtaining similar x-rays on an equal number of persons with no back complaints and with no history of back injury or backache. Splithoff[1] reported in 1953 on such a study made at the New York Orthopedic Dispensary and Hospital. In addition to his own studies, he reviewed similar studies conducted by several other investigators. Splithoff's findings as well as those of the others tended to show that the x-rays of persons without backache revealed as many congenital anomalies of all types, including spondylolisthesis and transitional L5, as did those with a history of backache and in about the same percentage in each category.

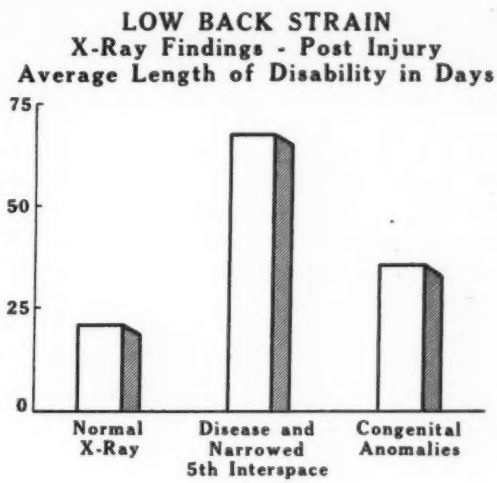

Figure 7.

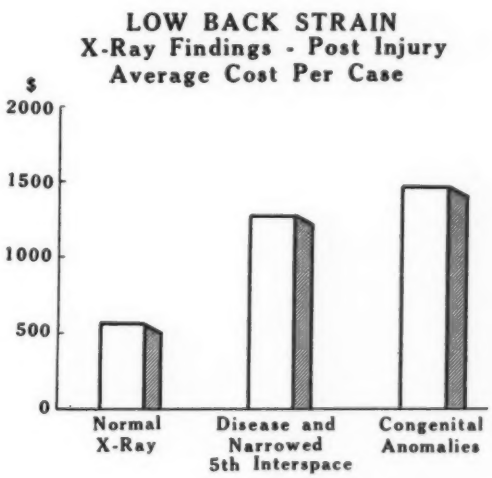

Figure 8.

Routine Preplacement Back X-ray Program Evaluated

Although these studies were interesting, they do not appear to shed any conclusive light upon the question as to whether such congenital anomalies do or do not predispose one to back strain. Because of lack of any definite evidence on this point one way or the other, the industrial physician frequently is hard put to decide whether he should inaugurate a routine preplacement back x-ray program for his industry, or, if he has one in effect, whether or not it should be continued or abandoned.

There does not seem to be any question but that a routine preplacement back x-ray program detects and serves to weed out a certain number of back abnormalities that would otherwise present rather definite hazards for back strain. A routine x-ray program of this type, however, also can be a fairly expensive undertaking. Of course, if the Plant Medical Department has its own x-ray facilities, costs usually can be maintained within reasonable limits. If the services of an outside private roentgenologist are used, both for taking the films and interpreting them, then each back x-ray will cost the industry anywhere from $15 to $20. If we assume a cost of $15 per case, then if 2,000 men were examined for employment in any one year, the cost of the back x-rays alone will be $30,000. Since the industrialist or plant manager is always concerned with costs, one way to approach the problem is on this basis. For example, if a back x-ray program in a given industry will cost $30,000 a year and if the costs of industrial back injuries for a prior year averaged out to only $15,000, then the industry would probably lose $15,000 by installing such a program. On the other hand, if the program would cost $30,000 and the cost of back injuries that might have been prevented by this program cost $60,000 in a previous year, then it could be argued that the industry would save $30,000 by inaugurating such a program.

In initiating or continuing a routine preplacement back x-ray program, the subject of radiation exposure also is a consideration, especially in

view of the extensive publicity being given today to the hazards of ionizing radiation and its possible cumulative effects. Personally, I do not believe that the factor of radiation exposure from a routine back x-ray examination of an applicant should be an important consideration. In deciding whether to x-ray or not to x-ray, the best available studies[2,3] that I have been able to locate calculate an average gonadal dose of 100 milliroentgens from a routine x-ray of the lumbar spine in the male, which includes anteroposterior, lateral, and spot lateral views of the lumbosacral area and the anteroposterior view of the lumbosacral joint and sacroiliacs with the pelvis and hips receiving 450 milliroentgens. This is a relatively small dose, especially when one also considers the fact that it is received usually only once by any one person. Of course, the number of milliroentgens of exposure will vary up or down to some extent from the average dose just quoted, depending upon whether or not a low voltage or high voltage technic is used as well as target distances, amount of filtering, and other factors. The maximum permissible radiation dosage per week, however, to which a person presumably may be exposed with safety week in and week out is 300 milliroentgens.

As I have previously mentioned, we have had a program of routine preplacement back x-ray examinations in effect at the Company's Boston Medical Office since 1953. Such a program was inaugurated at that time so that we might convince ourselves eventually of its value or lack of value.

The New England Telephone and Telegraph Company operates in five New England states. Roughly half of our employees are concentrated in the Greater Metropolitan Boston area and are available to and usually are examined at the central Medical Office at Boston. The other 50 per cent of our employees are scattered throughout Maine, New Hampshire, Vermont, Rhode Island and the remainder of Massachusetts.

In 1953, because of continued expansion of the business, the Company was employing plant craftsmen in a reasonably regular and continuing fashion. Approximately half of the male applicants were examined at the Boston Medical Office and the other half were examined by the Company's local medical consultants situated throughout the entire New England territory. The male applicants at the Boston Medical Office had x-rays of their back taken as a routine. The male applicants examined by the Company's local consultants did not have x-rays of the back obtained in connection with their preplacement examination.

Covering the six year period 1953 through 1958 there was a total of 3,574 male Plant Department applicants x-rayed at Boston. During the same period there were 2,893 examined by our local medical consultants and employed without having had x-rays taken. Incidentally, of the 3,574 applicants, in 133, or 3.8 per cent, congenital anomalies were revealed which we believed significant enough so as to require special placement in employment. Initially, it was our intention to continue this program for a 10 year period and at the end of that time to analyze the industrial back injury experience of the x-rayed and therefore carefully selected and properly placed group and similarly to analyze the experience of the other 2,893 males who had not been x-rayed and therefore had not the same degree of careful selection in job placement insofar as the presence of any congenital anomalies in the lower spine were concerned. The second step then would be to assemble all the back injuries occurring in the non-x-rayed group and now, or at least at the end of the study period, to obtain x-rays on this group, which actually might be said to be serving as our control. In this way we hope possibly to come up with something that will give us more definite evidence on which to base a conclusion as to the value or lack of value of a routine preplacement back x-ray examination program.

Another interesting finding as the result of the study of Bell System industrial back injuries was that more than half of all of these injuries occurred within the first two years of employment. This has led us to believe that perhaps we do not need to wait a full 10 years before completing the study I have just mentioned. Since this is now the seventh year of the program, we are planning in the near future to begin such an analysis of the back injury experience of these two groups covering this six year period.

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Experiences With the Shirodkar Operation

A Preliminary Report

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Prematurity is the greatest single cause of death in the neonatal period, accounting for as many deaths as all other causes combined. As Eastman[1] stated, there are two ways of attacking the problem of fetal loss due to prematurity: first, by increasing the survival of premature infants born; and secondly, by lowering the incidence of premature delivery. The first of these is a challenge to the pediatrician, while the second lies in the province of the obstetrician.

Recently in obstetrics there has been a concentration of effort in the direction of the prevention of one of the demonstrable causes of premature labor, namely incompetency of the uterine cervix. In my study[2] of the effect of amputation of the cervix uteri upon subsequent parturition, reported in 1951, it was found that premature labor or abortion followed this operation in a large percentage of cases.

It is thought that the cervix acts as a ring to support the pregnant uterus and when this ring becomes incompetent the pregnancy will no longer continue, but rather will drop out. Patients with an incompetent cervix fall into a pattern as regards their obstetric history. Usually they have a history of a term delivery of rather precipitate nature, or of an operative procedure having been performed. Subsequent pregnancies continue to a point approximately four to six or seven months in duration and then spontaneously abort, almost without warning. The fetus in most of these cases is well preserved, showing that it was a developing organism up to the time when it was detached from its environment in the uterus.

Much attention has been directed recently to the early diagnosis of this condition and the treatment of it by purse-string ligation of the cervix in the so-called Shirodkar procedure.[3] This paper deals with a small series of cases in which this operation was performed in a general hospital as an independent study. It does not pretend to complement the much larger series present in the literature, but rather its purpose is to stimulate interest among the independent practitioners in the early diagnosis of this condition, and in the simple procedure for prevention of miscarriage in this small group of patients.

Case 1.—The first patient of the series was a 30 year old Para 1-0-1-1, first seen in the office on Nov. 4, 1957. She was referred by her family physician with the diagnosis that the cervix was dilated and the membranes presenting. Her last menstrual period had been on June 19, making her approximately 20 weeks pregnant. She related that in August 1954 she had delivered a seven pound baby rather precipitately after a labor of 90 minutes from start to finish. The patient had not been attended at the time of delivery, so precipitate had been the labor. In June of the following year she had spontaneously aborted a five month gestation.

She was seen by her family physician earlier in the morning of her office visit for the complaint of abdominal discomfort and bleeding. A speculum examination at his office had revealed the cervix to be dilated and the membranes bulging. This finding was confirmed upon my office examination, the cervix being dilated approximately 3 to 4 cm. with membranes at the level of the os. The patient was admitted to the Baptist Memorial Hospital immediately.

On admission, the hemoglobin estimation was 8.6 Gm. and the hematocrit reading 27. The patient received 500 cc. of blood on the day of admission and a second unit the following day. At this time a paper by McDonald[4] of Melbourne, Australia on "Suture of the Cervix for Inevitable Miscarriage" came to my attention. This author reported a series of 70 cases in which ligation of the cervix was performed for inevitable miscarriage, in most of which the period of gestation was between 20 and 24 weeks. Of the 70 patients in this series, 33 gave birth to infants that survived, whereas 16 others had their pregnancy extended by a period exceeding four weeks. He stated that when the method failed, it did so mostly during the first week following the operation.

Although this was a new procedure and not one receiving attention in the American literature at that time, it was decided to perform the operation upon this patient. With adequate consultation, since this procedure was other than the normal method of treatment in the community in which I practiced, the patient was taken to the operating room and a purse-string suture placed around the cervix. In the Australian study No. 4 Mersilk was employed. Since this was not available, a double strand of the largest suture material available, which was No. 3 silk, was used. Under general anesthesia this suture was placed at 2, 4, 6, 8 and 10 o'clock and the suture tied at 12 o'clock. By the time the patient was taken to the operating room, however, the cervix was almost completely dilated and the membranes were presenting at the introitus. It was necessary to fold these back into the uterine cavity and hold them there with a sponge stick until the purse-string suture was placed and drawn tight. Upon tying the suture, the cervix regained its normal appearance and length. The patient was given Proluton and Achromycin and was sent back to her room in good condition. Heavy sedation was also employed.

Approximately 24 hours later, the patient began to have severe pain, accompanied by firm uterine contractions. Speculum examination at this time revealed that the cervical suture had pulled out at its 6 and 8 o'clock insertions, being still attached at 2, 4 and 10 o'clock, and the cervix was dilated 3 cm. The patient was taken to

the labor room and at 6:50 p.m., approximately 25 hours postoperatively, she delivered spontaneously a four and one-half month premature infant, the heart action of which was good but the respirations immature. The subsequent course in the hospital was uneventful, and she was discharged on the third postpartum day.

Much was learned from this case despite its unsuccessful outcome, and confidence was gained for further work along this line. In retrospect, it was thought that had the procedure been performed upon admission when the dilatation was 3 to 4 cm., it might have been successful. Also, it was thought that the suture should have been of greater caliber and tied under less tension. It was determined to repeat the procedure should the situation present itself again, with these two changes in technic. Accordingly, office patients who gave the history of having repeated late abortions were looked for and examined at weekly intervals starting at the end of their first trimester. Fortunately, one of these was soon found, and hers is the third case presented herein. It is a typical example of the manner in which the Shirodkar procedure is indicated and can be of value in repeated abortions. Prior to this patient's appearance, the procedure was performed on a patient who threatened to abort without previous typical history.

About this time much attention was given in the American literature to the cervical closure of the incompetent cervix during pregnancy. An excellent study[5] from the George Washington University Hospital and the Walter Reed Army Medical Center stressed that aneurysm needles and broad suture material such as fascia lata from the thigh contributed to success. Other studies reported the use of a broad synthetic suture material called Mersilene, but the principle remained the same.

Case 2.—The second patient was a 28 year old Para 0-1-1-1. She was delivered by me of her first pregnancy, a 5 pound 2 ounce premature female child, on Sept. 3, 1955. She had spontaneous onset of labor at 36 weeks and a very rapid termination of her labor, going from 4 cm. dilation to delivery in 30 minutes. This infant survived without difficulty. Following this pregnancy, she aborted at approximately three months, spontaneously and without complication.

She was seen in the present pregnancy first on March 25, 1958 with a last menstrual period on February 12. The uterus was the size of a six week pregnancy. The pregnancy continued uneventfully until June when she was admitted to the Baptist Memorial Hospital with lower abdominal pain. It was thought at this time that she had an infection of the urinary tract and possible threatened abortion. She responded to bed rest, urinary chemotherapy, and sedation.

She was next admitted on August 21 for severe lower abdominal pain and uterine contractions. At this time she was approximately 27 weeks pregnant. At the time of each pain a definite firm uterine contraction could be felt. Morphine, grains 0.25, was employed for 48 hours with little relief of pain. Upon examination at this time it was found that the cervix had begun to dilate and was approximately 3 to 4 cm. dilated.

Despite this patient not falling into the group with incompetency of the cervical os, her history did match that of patients in the Australian group on whom suture of the cervix was performed for inevitable abortion. On August 23, approximately 48 hours after admission, the patient was taken to the operating room and a Shirodkar procedure performed. Since the Mersilene suture most recently recommended was not available locally, a 16 gauge polyethylene catheter was employed as suture material. A small incision was made at 6 o'clock in the region of the attachment of the mucosa to the junction of the fornix and with an aneurysm needle the suture brought forward to 12 o'clock where it was brought through the mucosa. This step was repeated on the other side and the polyethylene catheter tied down, its purse-string arrangement closing the cervix. The following day there was a noticeable decrease in the number of contractions and in discomfort, and the patient was discharged on the fourth postoperative day.

She was readmitted on September 23 with severe abdominal pain, and again uterine contractions were present. Examination at this time revealed the cervix to be as tightly closed as at the conclusion of the operative procedure of the preceding month. The contractions were finally controlled with bed rest and sedation, and the patient was discharged with tincture of opium prescribed and bed rest at home except for meals and bathroom privileges. Prior to this admission she had been allowed full time activity at home.

Her fourth admission was on October 15, approximately five weeks prior to her estimated date of confinement. At this time she was having firm uterine contractions. Speculum examination revealed the cervix to be tightly closed. It was elected at this time to remove the purse-string suture on the judgment that the patient would spontaneously deliver from below a fetus capable of extrauterine existence, such being preferable to cesarean delivery with the suture intact. It was thought that the patient could carry the pregnancy little longer, and there was some fear that the suture might tear through the cervix and amputate this organ. Accordingly, the suture was removed, and the patient was delivered of a 4 pound 9½ ounce premature living normal male child, who is getting along well.

This case points out the employment of this procedure in cases of inevitable abortion. Here it was successful in prolonging a pregnancy from a time when the infant definitely would have been immature to a time when the infant survived. This patient was able to carry her baby an additional eight weeks by the simple procedure of purse stringing the cervix, and then was allowed to deliver vaginally.

The third case to be described is that of the patient with a typical history of incompetency of the cervical os, who was followed closely in the office and diagnosis made upon dilatation of the external os. This patient was treated in the fashion advocated by several of the studies in which the closure of the cervix was carried out during pregnancy, the suture left in place, and the patient delivered by cesarean section.

Case 3.—A Negro woman was first seen in the office on Sept. 19, 1957 for initiation of maternity care for her fourth pregnancy. Her previous three pregnancies had

ended in spontaneous abortion, the third of which was in 1954, at five months' duration. Her past history was entirely normal, showing no operations, serious illnesses, transfusions, or unusual deviations from general health.

Examination at the time of her initial office visit showed a moderately obese woman approximately four and one-half months pregnant by abdominal palpation. The cervix upon vaginal examination was found to be shortened and the external os patulous. A diagnosis of pregnancy in an habitual aborter was made, and the patient was given an equivocal prognosis. Dienestrol was prescribed, and when she was seen in the office a month later, the pregnancy was progressing normally, fetal movement being discerned.

She was next seen in Brewster Hospital three weeks later on November 4 with the history that the membranes had ruptured two days before and that cramps had commenced the morning of admission. At this time she spontanously aborted a five month pregnancy.

She was seen for her fifth pregnancy on June 30, 1958 with a history of her last menstrual period on February 10. She had already felt the baby move. Examination revealed the height of the fundus to be 23 cm. and the fetal heart tones not heard. The cervix was somewhat shortened but closed. At this time she was advised to be checked in the office for cervical inspection visits at weekly intervals in addition to her regular maternity visits. She was subsequently seen at weekly visits in the office until September 10. On the visit of August 27 the cervix was finger-tip dilated and also on the intervening visit of September 3. On September 10 the patient began to spot and have abdominal cramps. She was admitted to Brewster Hospital and on the next morning examination revealed the cervix to be 3 to 4 cm. dilated and two thirds effaced. The abdominal cramping continued.

An x-ray examination was performed, showing a fetus of approximately four pound size occupying a breech position. The patient a few hours later was taken to the operating room where a Shirodkar operation was performed employing the 16 gauge polyethylene catheter. She was discharged four days later and next seen in the office on October 1. At this time the cervix was nicely closed and the patient was scheduled for cesarean section on October 20, which was approximately four weeks prior to her estimated date of confinement.

On October 15 the membranes ruptured spontaneously at home at 4 a.m., and she was taken to the hospital where a laparotrachelotomy was performed at 6 a.m. with delivery of a 7 pound 2 ounce full term living normal male child. The baby and mother were discharged on the fifth postoperative day.

Comment

A summary of my experience with the Shirodkar procedure shows that it is necessary to employ broad suture material and to perform the procedure prior to full dilatation of the cervix. The polyethylene catheter employed in this series in the second and third cases was satisfactory and had the advantage of availability and flexibility. Additional cases will be treated with the same material in order to evaluate it and to compare results with those obtained with the commercially available Mersilene.

In my opinion the Shirodkar procedure should be a part of the armamentarium of any physician practicing obstetrics and can be used either in cases of inevitable abortion, as in case 2, or in cases of incompetency of the cervical os, as in case 3. As the latter case illustrates, it is not difficult to examine the habitual late aborter at weekly intervals with a vaginal speculum in order to pick up the dilatation in time. This plan has been recommended by many of the authors on this subject. In addition, in the patient seen for the first time with beginning dilatation of the cervix and uterine contractions, and with a viable fetus with good heart tones and minimum bleeding, certainly it is a procedure to be tried. Without it, the incidence of abortion and neonatal death is 100 per cent; with it, there is at least a chance of continuance of the pregnancy for a sufficient number of weeks until viability and survival are reached.

As the procedure becomes more widely described and employed, the incidence of success will increase. It is necessary, however, to stress the importance of not overdiagnosing the necessity for this procedure. It should be used only in those cases in which abortion would otherwise occur, or in cases with a strong history of late abortions, because its employment usually dictates not the one operation of the Shirodkar procedure but a second operation of cesarean delivery. A cesarean section is not always necessary, as has been demonstrated, since the suture can be removed. If subsequent pregnancies are desired by the patient, it is better to leave the suture in place and perform abdominal delivery.

Summary

A procedure has recently been introduced into the field of obstetrics whereby some spontaneous late abortions may be prevented and the pregnancy carried to term or near term.

This procedure consists of purse stringing the uterine cervix at approximately the level of the internal os.

This paper discusses the indications for the employment of such a procedure, presents one method of treatment thereof, and discusses the results in a small series of cases.

The main purpose of the paper, however, is to bring out certain practical points in the use of this new procedure by relating the clinical aspects of the cases reported, and thereby to encourage the physician specializing in obstetrics to include this procedure in his armamentarium.

Addendum: Since the submission of this paper for publication, a fourth case has been managed by employment of the Shirodkar procedure. The patient had previously delivered a 32 week fetus which did not survive. In the present pregnancy the cervix was in-

spected at weekly intervals. On Feb. 17, 1959, inspection revealed a beginning dilatation of the cervix. The Shirodkar procedure was carried out later that day, at which time the cervix was completely effaced and approximately 4 cm. dilated with the membranes and fetal head visible. Heavy progesterone supportive therapy was employed owing to the presence of some uterine contractions. The patient was delivered six weeks later of a 5 pound 3 ounce premature female living child under saddle block anesthesia and over a generous left mediolateral episiotomy following a long labor. The Shirodkar suture was removed prior to labor in preference to performing cesarean section because of the premature size of the baby. Examination at six weeks postpartum revealed the cervix to be closed but definitely shortened. It is planned to perform cervical repair prior to the onset of another pregnancy.

Also since this paper was submitted for publication, an excellent paper presenting a large series of cases has been published (Easterday, C. L., and Reid, D. E.: Incompetent Cervix in Repetitive Abortion and Premature Labor, New England J. Med. 260:687-690 (April) 1959).

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Listeriosis

A Growing Public Health Problem

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Listeriosis is a relatively unknown widespread bacterial disease of man and other warm-blooded animals. The etiologic agent, Listeria monocytogenes, has been recovered from man, mammals and birds in nearly 30 countries and in diversified geographic areas ranging from the Arctic to the Tropics. Natural infection of animals has been observed with increasing frequency, and L. monocytogenes has been isolated from over 28 animal species such as guinea pigs, chinchillas, ferrets, chickens, geese, hamsters, rabbits, mice, rats, voles and gerbilles. The disease is common in cattle, and sheep are especially susceptible. The majority of infections have been proved to occur in domestic animals, but it is significant that there exists an abundant reservoir among wild species, many of which are migratory and some of which are predatory.

The increasing number of human cases and the fact that it is being associated more frequently with disease of livestock and poultry make listeriosis a much more important disease than it was considered to be previously.

History

Listeria monocytogenes was first isolated and studied in 1924 by Murray, Webb, and Swan from an epizootic affecting their laboratory rabbits.

The organism called Bacterium hepatis in 1911 by Hulphers was undoubtedly L. monocytogenes. The same organism was recovered by Pirie from wild gerbilles in South Africa in 1925. He named it Listerella hepatolytica, since it attacked the liver of the infected animal. English workers finally renamed the organism Listerella monocytogenes. The generic name Listerella was changed by the Third International Congress of Microbiology in 1939 on the grounds that Jahn had already used the name for a mycetozoon in 1906. Pirie, in 1940, suggested calling the organism Listeria, and this generic name is now generally accepted.

In 1929 Nyfeldt recovered the organism from the bloodstream of a boy with infectious mononucleosis, this being the first recognized isolation of Listeria from a human being. Gill was the first to recognize the disease in domestic animals. In 1931 he isolated it from sheep in New Zealand and gave the name "circling disease" to the encephalitis which it caused. Since these initial publications, there has been an increasing number of reports concerning Listeria in the medical literature throughout the world.

Bacteriology

Morphologically, L. monocytogenes is a gram-positive, non-acid-fast non-spore-forming rod. There is a tendency for the organisms to form palisades or to arrange themselves into V's when

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the smear is made from solid mediums. This arrangement of the bacilli is similar to that seen in the case of diphtheroid bacilli. The bacteria stain evenly and are 0.5 to 0.6 by 1.0 to 2.0 microns in size. Growth is usually sparse on plain agar medium, but is usually luxuriant on mediums enriched with glucose or body fluids. On blood agar distinct beta hemolysis is usually evident within 24 to 48 hours of incubation.

Listeria organisms differ from nonmotile diphtheroids in that they are sluggishly motile. They exhibit a characteristic spiral or "tumbling" movement. Motility is usually apparent within 24 hours and is best observed on semisolid mediums.

Listeria monocytogenes produces acid but no gas in a variety of carbohydrates. At least four antigenic types are known.

It must be remembered that Listeria may be confused with nontoxigenic Corynebacteria and occasionally Streptococci.

Diagnosis

The actual diagnosis of listeriosis depends upon the awareness of the bacteriologist, in view of the fact that the clinical features of this disease are not well defined. Cultures should be made from cerebrospinal fluid, blood, urine, meconium, pus and exudates according to the particular case. At autopsy, cultures should be made from all organs. Brain tissue, especially the medulla oblongata, should not be forgotten. Microscopy is of utmost import, and hanging drops for characteristic "tumbling" should always be performed.

Another test of great value in confirming the presence of Listeria is the so-called "conjunctival test." Two drops of an overnight broth culture of Listeria are instilled into the conjunctival sac of a rabbit or guinea pig. An intense purulent keratoconjunctivitis will usually occur after 48 hours. The specificity of agglutinating titers is questioned since Listeria has common antigens with staphylococci and with Streptococcus faecalis. Also, because of the fact that the agglutination titer diminishes rapidly, it is not reliable for late diagnosis.

Clinical Findings

Six types of listeriosis have been described by Seeliger. The relative frequency of the types encountered is as follows:

1. Septic type with mononucleosis	8 per cent
2. Oculoglandular form	6 per cent
3. Septic typhoid form	21 per cent
4. Infection of the central nervous system	33 per cent
5. Granulomatous sepsis of the newborn	29 per cent
6. Listeriosis in pregnancy	

The clinical picture caused by L. monocytogenes in humans has been described as a meningoencephalitis. In children and adults the following observations have been made: sudden or gradual illness with fever, vomiting, headache, lethargy, stupor, irrationality, convulsions, strabismus, ptosis, diplopia and rigidity of the neck. Listeria meningitis in man resembles other purulent meningitides and it cannot be distinguished clinically from meningitis due to other bacteria.

A form of human listeriosis known as granulomatosis infantiseptica is second only in importance to listerial meningitis. This is an intrauterine infection with a high mortality rate for the fetus or the newborn child. Curiously, it does not seriously affect the mother, who may be entirely asymptomatic, although more commonly there has been a history of influenza-like symptoms characterized by slight chills, lumbar pains and slight elevation of temperature a week to a month ante partum.

Septicemia is probably the most commonly occurring form of listeriosis in man. The involvement of the reticuloendothelial system stimulates a monocytic response, thus causing confusion in differentiating the disease from infectious mononucleosis.

It is obvious that the clinical manifestations of listeriosis are diverse, since they include abortion in cattle, sheep and goats, mononucleosis in man, and meningeal or encephalitic infection in man, cattle, sheep, goats and swine. Involvement of the central nervous system, considered the most characteristic form of the disease in ruminants, is manifested by abnormal posturing of the animal's head and neck and its walking aimlessly in a circle ("circling").

Epidemiology

Listeriosis is a disease with an extremely widespread distribution, involving many unrelated and varied hosts with widely different food and living requirements. The source of Listeria infection in human cases is rarely discovered. There is no evidence that the disease is transmitted directly from animals, and it is generally agreed that in babies the most likely source of infection is the maternal genitourinary tract.

The clinical, pathologic and bacteriologic characteristics of listeriosis vary in different hosts, and there is no indication whatever that this variation is due to differences in species, variety or type of infecting bacterium. The species character of the microorganisms isolated from all kinds of hosts in every country seems clearly to be homogeneous and identical in essential ways, with the exception only that there may be different serotypes involved in different regions and that individual strains may show greater or lesser degrees of virulence to laboratory animals.

Transmission from human to human (except transplacental) has never been proved. Some have postulated the gastrointestinal tract as the most likely route of entry. The isolation of L. monocytogenes from the cervix of lactating cows may explain why raw milk may be a source of infection.

The epizoology and epidemiology of listeriosis is still not clear. It is known that listeriosis occurs in wild mammals including birds and rodents. It is possible that transmission from group to group exists, but the mechanism has never been determined. Direct contact may possibly play some part in the spread of this disease among animals. Ödegaard, Grelland and Henriksen reported a case which presumably was transmitted from sheep.

In animal infections there is a definite seasonal distribution. The greatest number of cases occur in the spring and winter months. This does not appear to be true of human infections. Sex and age distribution in both man and animals show little differences in the incidence of infection, but the younger the creature, the more unfavorable the prognosis.

Since 1950, 83 human cases and over 2,000 animal cases have been confirmed in the United States. It can, therefore, be concluded that listeriosis is a growing public health problem, especially since little is known regarding the frequency and even less concerning the epidemiology of this disease. The most important factor in the recognition of this relatively new disease entity may well be an awareness of its existence.

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1350 Northwest Fourteenth Street.

FLORIDA MEDICAL ASSOCIATION ANNUAL GOLF TOURNAMENT

The Golf Tournament will be held at the Selva Marina Country Club, Atlantic Beach, and will be terminated Saturday, April 9. All local physicians are requested to play during the week prior to Saturday (April 9). Competition again will be made for the Duval County Medical Society Trophy as well as the Orlando Loving Cup.

Prizes will be awarded Saturday night, April 9, at the Woman's Auxiliary buffet dinner and dance at the Mayflower Hotel.

Participating physicians may purchase chit books at the club. For additional information contact Dr. A. Judson Graves, Chairman, 1661 Riverside Ave. or Dr. George M. Stubbs, Co-Chairman, 2033 Riverside Ave., both in Jacksonville.

Problems of the Blues

SAMUEL M. DAY, M.D.
JACKSONVILLE

As Blue Cross and Blue Shield coverage has become more widespread, it is only natural that the problems encountered in administration have increased many fold. Since these are comparatively new organizations in the insurance field, there may have been costly delays in making proper adjustments for these problems with resulting serious lapses in public relations. In some instances this may have seemed to make a paradox of a very definite Blue asset. The professional guidance given voluntarily by well qualified doctors and hospital administrators to the Blue Plans would be a very costly item, if obtainable, by ordinary insurance companies. This gives us an unselfish personal touch unmatched in insurance. It gives special consideration to the problems of the patient and the doctor by people who encounter those same problems day by day. Unfortunately, this excellent advice must come slowly because the primary occupation of these men lies in their profession rather than in insurance. Deliberations may be so long drawn out that interested parties have become embittered and have turned against the only insurance that embodies their own interest.

The Blues of Florida present no exception to these very serious difficulties. Many conscientious doctors are "at their throat" because of misunderstandings caused by delays and by actions, reports and policies untempered by the soothing touch of those more expert in public relations. We hear it said that "doctors are not insurance-minded and should get out of the field." Such an exit would be a grave mistake because doctors are medical-minded, and who but them can solve these medical problems? They may not solve them as quickly or as glibly, or as positively, as insurance men, but assuredly they will do it with feeling and conscientious thought for those involved.

Dr. Day has served on the Claims Committee for 12 years; during the past three years he has also been part time medical consultant helping with the more involved problems. Desiring to devote more time to his family, his practice and his educational activities, he has resigned after securing a capable replacement. In hopes of promoting better understanding between the doctor and Blue Cross-Blue Shield, he publishes these reflections as some of the major problems encountered during his period of service.

These doctors and their lay experts have been able to do their job so well that these Blues have thus far been the major factor in delaying and, possibly, defeating the socialization of medicine. They have shown the professional insurance men how to do what these same insurance men said could not be done. Furthermore, the success of the Blue Plans has made their idea a major attraction to the profit-minded insurance companies. Certainly we have no quarrel over one's right to make money in his own way. That is a fundamental principle of our country which makes it great. We are not, however, so naive as to fail to see that money can be the basis of selfishness, and "big money" may breed "big selfishness." The doctors' interests can get lost quickly in the rush of "big insurance." Competitively, there are tricks of the trade that we are slow in grasping; the very personal nature of our organization leaves us open to these maneuvers. As in a dictatorship, "big insurance" can make quick decisions and take quick action, sometimes leaving the Blues seemingly far behind. But never fear, unless we are destroyed from within by quibbling and backbiting by those who honestly misunderstand the organization and those who for selfish reasons would prefer to better other ends than those of their profession, the Blues will not only survive but will continue to lead the way—and with a medical viewpoint.

That doctors are human cannot be questioned. Patients are, too. This qualifies each to make honest errors as well as dishonest forgeries. Fortunately, those who are inclined to the latter are in the extreme minority, but they do present themselves from time to time. Checks and balances are a necessary part of our organization; the Claims Committee has this as its major reason for being. This committee in our state is composed of an anonymous group of volunteer doctors from various fields of practice who meet semimonthly to consider major problems and recommend solutions. They are advised by a lay claims expert and one part time physician who has been a member of the Claims Committee for 12 years, but recently has been paid for approxi-

mately 12 hours monthly to contribute much more in time and knowledge. These interested persons may not always come up with the right answer, but it is beyond question that they have given sincere consideration to the problem at hand with the unselfish interest engendered by mutual understanding. These "Problems of the Blues" are their problems. They are our most expert word, but in keeping with the democracy of the Blues, they are not necessarily the final word, as one can always appeal to the Board of Directors if not satisfied with Claims Committee decisions. The Board is elected by the House of Delegates of the Florida Medical Association. Its members also serve without pay and are charged with matters of policy as their primary duty. A capable lay Executive Director and a staff of 325 carry out their policies.

Major Problems

Problems of the Blues have been found to fall into 10 categories: (1) Pre-existing Conditions, (2) Diagnostic Admissions, (3) Concurrent Care by More Than One Doctor, (4) Discrepancies in Diagnosis and Treatment, (5) Failure to Appreciate Service Benefits, (6) In-hospital Complications, (7) Office Surgery, (8) X-ray Therapy, (9) Cosmetic Surgery, and (10) Other Healing Arts.

Just as a casualty company cannot insure a house that is already afire, health and hospitalization insurance cannot underwrite a disease that is already under way. Even clearcut cases are sometimes difficult to decide, but incipient diseases, like smouldering fires, may be extremely hard to judge. Riders may be attached to individual contracts in order to permit patients to obtain Blue Cross and Blue Shield, yet protect the Plan from conditions known to exist before the contract. Riders are worded for the benefit of the Plan since they are issued for the benefit of the patient. They must be unusually broad because of the odd claims and interpretations made by some patients, some doctors, and even some courts.

Reliability

Of all the Blue problems, that dealing with questionable reliability of the patient's and the doctor's word makes administration more difficult. Sometimes responsibility for payment of rather large sums of money may rest on a few words given by the patient to his physician and by him in turn to an insurance company. Medicine is usually regarded as an honorable profession and very likely the veracity level is higher in medicine than in most other walks of life, but when seeing it from an insurance angle, an idealist would certainly become depressed at what he saw. Much of the difficulty may stem from the doctors turning matters over to secretaries and others, and not taking the time to inform them correctly of the facts. Too frequently, however, it seems to be a weakness on the part of the physician to yield to pressure by the patient, quite possibly due to sympathy, but sometimes with the background holding the reward of a paid bill.

Initially, claims personnel of the Blues took the doctors' statements without question, but after encountering changing pictures, conflicting stories and impossible situations, the Claims Committee has been forced to rely more and more on hospital records and other information available to it. It makes an interesting but discouraging picture to compare various stories on a single case.

To illustrate only a few, some of which are comical and some are not, some explainable and some not, the following examples are presented:

Dr. X furnished medical information for a Blue Cross–Blue Shield family application indicating that a husband and wife were in perfect condition. Shortly thereafter a note from the doctor was received which stated: "Had a great deal of pressure put on me today and would have withstood same, but the parties concerned had managed to reach my wife. You will receive applications mailed tonight from Mr. and Mrs. S. They were 'all filled out for me,' and my wife was very anxious as she said any delay would mean dire consequences for me. So I took the easy road. To begin with, they are neighbors and not patients of mine. Also I understand that Mr. S is a heart case under the care of Dr. W and that Mrs. S has angina and both of these could be wrong, but would suggest you not accept either one of them until you have made further inquiries, and I should be more than delighted to hear what you find for the heat was really on me today and unfortunately from my own family; so I thought the easiest way out would be to fill in the forms as they had suggested and then just drop you a line for I certainly will be no party to any dishonesty in insurance forms."

By means of the letter the good doctor removed himself as a party to dishonesty, but would not the patient and all of us have re-

spected him more if he had retained a basic honesty and had the will to defend it, rather than explaining his weakness behind the patient's (and his wife's) back and giving the Blues the difficult public relations job of rejecting a patient without justifiable cause so far as the patient can see?

The next case also turned out right in the end, but after much more correspondence as well as some rather odd feminine reasoning with complete justification of self. The patient was admitted to the hospital four months after the effective date of the coverage. The diagnosis was chronic perianal dermatitis. Additional information was requested from the lady doctor who stated that the condition had existed for approximately a year. Further information indicated the condition had been present for "several months;" so benefits were denied on the basis that the condition existed prior to the effective date of the contract.

Shortly thereafter, an angry letter from the irate subscriber enclosed a letter she had received from the doctor, which is quoted: "In reply to your request with regard to the trouble you were having with your rectum, may I say that having examined you on numerous occasions, my examination on July 15 was the first time I ever saw the difficulty which finally led to your being operated upon." (The July 15th examination that the doctor had made was approximately one month after the effective date of the coverage.) "At my previous examination two months before, there was no such condition present, and that is the reason nothing was suggested in the way of treatment. I felt at the time and still feel that the condition which led to surgery was an acute one, and because of that belief I cannot see any reason to feel that it existed for any appreciable length of time before you were operated. As I stated before, I know from my own examination that it was not present late in May. I trust that this will answer your questions with regard to the duration of your illness. Since I have been taking care of you for two years, I feel qualified to make a definite statement on the subject."

Photostatic copies of the doctor's conflicting letter and questionnaire were then sent to the doctor with a request that she put us straight. Soon this letter was received in reply, "Let me say that I fully remember my previous report and understand your attitude completely. I felt sure that in view of that previous report anything that I may have written to the patient would cause you to make the proper decision. It is sometimes extremely difficult when the letter is to go through the hands of the patient to be completely frank. I hope that you understand my position and will realize that in view of my previous report I felt that there would be no miscarriage of justice. I trust that this will clarify the situation." It DID, but as an interesting postscript the hospital record signed by that same doctor stated, " . . . chief complaint of rectal itch of *14 years* duration."

These are extreme cases with a humorous twist. Correspondence was the most difficult administrative problem involved, but even that is time-consuming. Since some Florida Blue contracts specifically exclude "services during the first nine (9) months after the effective date of this contract for any conditions existing or originating prior to the effective date of this contract, and service for any condition for which medical or surgical treatment or advice has been rendered within one year prior to the effective date of this contract," a great burden of interpretation rests upon the Claims Committee. Recognizing that many of the claims possibly represent the patient's only current means of meeting serious financial obligations, the Claims Committee seriously weighs each available fact before making a decision. Since people do falsify information and sometimes even change doctors so that the true facts will not come to light, the Claims Committee must remain objective in its thinking. Consequently, pre-existing conditions are decided on the basis of the time of onset of symptoms related to the condition and/or the reasonable period of time expected in the development of a condition based on history, physical findings and pathology. To our regret, that sometimes forces us to go completely against the sincere advice of the patient's physician. It must be noted that the contract does not in any way state or imply that the patient or the doctor must KNOW of the existence of the condition. These are group contracts and, of necessity, they are accepted without history. Individual contract holders are theoretically never covered for pre-existing conditions.

One of the really difficult problems is herein illustrated. The group contract was effective on Aug. 1, 1956. The patient was first hospitalized on Sept. 26, 1956, approximately four months later. The history revealed the patient to have had radical mastectomy in another state in No-

vember 1954 for adenocarcinoma of the left breast, without axillary metastases. In August 1955, the same doctor performed a biopsy and partial right mastectomy because of a tumor said to be benign. A hard area was noticed at a stab wound drainage site beneath the breast a few weeks after the operation. In the meantime the patient moved to Florida and took Florida Blue Cross and Blue Shield. She was seen a short time later by a Participating Physician who advised biopsy of the firm area. This proved the presence of adenocarcinoma, and radical mastectomy was performed. We were not able to accept liability for Blue Cross and Blue Shield, although we were most sympathetic for an unfortunate victim of circumstance. She knew she had the lump, but she did not know it was malignant. We feel that malignancy with that history did not likely develop in four months. The problem was to continue to haunt us as the patient was readmitted to the hospital before the nine month waiting period was completed. This time she had bilateral oophorectomy, and incidental appendectomy, as further treatment for the carcinoma of the breast. Probably there was no legal liability, but the Claims Committee decided to pay this admission without precedent. Did we err? Although our organization is nonprofit, it is not charity. Already we return 90 per cent of the rate income to the subscriber, not leaving us too safe a margin for required reserves. The Boards of Directors can be held legally responsible for Blue Cross and Blue Shield monies; so we must be doubly careful in rendering decisions.

Diagnostic Admissions

Diagnostic admissions represent the other most difficult problem to interpret. Here also, failure to pay attention to details or downright dishonesty on the part of the patient and the doctor are the complicating factors. Too often we doctors permit the patient to make the decision as to "when to hospitalize." Typical of this thinking is the patient who was hospitalized for gallbladder x-rays and no treatment for a condition of long duration. On rejection of the claim by Blue Cross, her doctor wrote, "Miss _____ states that had she known this would be considered diagnostic only, she would have obtained her x-rays as an outpatient," which is just what the Blues have been begging patients to do for a long time.

A different approach is illustrated by this doctor of integrity. After his patient with gastritis was hospitalized for gastrointestinal x-rays, the doctor sent her the following letter, "I am taking this opportunity to confirm my verbal resignation, as of Tuesday, March 20, from your case. Your symptom complex is one that, had you had the patience to wait for a physician's impression, you could adequately have been treated on an outpatient basis. Be that as it may, your attitude in this instance precluded the doctor-patient relationship so necessary to therapy."

It is not proposed that we go to either of these extremes in dealing with these patients, but we should inform our patients of two basic facts:

(1) The patient's part of the hospital bill for diagnostic admissions is usually as much or more than the cost of the studies as an outpatient.

(2) The case may be rejected by Blue Cross–Blue Shield, so that the cost may be much greater than for the desired studies on an outpatient basis.

Here again, the Claims Committee attempts to weigh carefully all available facts. We have a somewhat paradoxical situation in that certain diagnostic studies, namely, diagnostic endoscopies, are listed items in our fee schedule. One can easily see how this makes a doctor "see red" who wished to make studies which are just as important and possibly even more indicated, but simply are excluded from the present Blue Cross–Blue Shield Contracts.

Be it right or wrong, the Blues were established initially to cover items that were considered predictable, were easily verifiable, and were somewhat limited in desirability by associated patient suffering as well as by anatomical maximums as to organs available. Those familiar with the history of the Blues will recall that one or two pioneers began with the coverage of medical and surgical procedures. They were quickly in financial difficulties and were forced to eliminate the more costly items, which happened to be medical and diagnostic ones. Was it not natural for other less original plans to profit by their mistakes? It was only when the medical doctors recognized the importance of Blue Shield to their own economics and began to take an active interest in its affairs that this picture began to change. It is hoped that our able liaison committee and the Blue Cross and Blue Shield Boards will work out a satisfactory solution in the near future.

The Blue Cross and Blue Shield Contracts state, " . . . specifically excluded: Any service to a subscriber primarily for rest or rest cure, primarily for diagnostic purposes or any service obtained or obtainable without cost to the subscriber from any governmental agency." The Claims Committee, in attempting to be as liberal as possible, has tried to pay for acute cases that required hospitalization for the safety of the patient even though they may have been primarily diagnostic. Even this is very difficult to determine sometimes with the cooperation we do not get from some doctors. A case in point is a recent one in which the doctor's Service Report and questionnaire stated the patient was acutely ill with hematemesis. Naturally we thought this a justifiable reason for admission, but a look at the hospital billing suggested that we get more information. The hospital records made no mention of hematemesis, but did list melena. That same doctor had written a progress note in which he stated that the patient was a heavy drinker, her story unreliable, and he doubted that there had been any bleeding. It was rejected as "an admission primarily for diagnostic purposes." A short time later a "certification" was received from the doctor in which he *certified* that the hospitalization was for the treatment of bronchial asthma. Absolutely no mention of asthma or any bronchial disease and no treatment for same in the hospital records or in any previous correspondence was found. This was called to the attention of the doctor, and we have heard no more. Probably simple carelessness, but it takes time to review the case repeatedly and adjudicate it fairly.

A significant illustration is that of the Blue Shield Board member who admitted a patient especially for treatment and diagnostic studies and did not find it necessary to treat in the hospital. The Claims Committee cannot base its decisions on its knowledge of the intent at the time of admission, or of the integrity of the individual doctor or patient. Too many patients and doctors unknown to the committee would suffer by such standards. It may be well to say that all claims should be paid and they would repay the Blues in public relations. The Blue Cross and Blue Shield Boards requested a study to determine what the cost of such a procedure might be. The results of the study were revealing. Diagnostic rejections had increased from 0.2 per cent of the total cases processed in 1955 to 1.22 per cent in 1958. Pre-existing rejections retained approximately their same percentage (see table). Since the net gain or loss of Blue Cross for a year approximates 1 to 5 per cent, it could ill afford these additional expenses, without giving consideration to the increasing number of claims that might result if the gates were opened.

A few doctors and several patients have reported their dissatisfaction with Claims Committee decisions to the Insurance Commissioner. A few have found their way to the courts. It is gratifying that only one case has been lost by the Blues on a Claims Committee decision. Always there have been good, local doctors who have been willing to review the case on an impartial basis and testify. The subscribers and the doctors as well as the Blue Plans owe them a debt of gratitude. Fortunately, it has not usually been necessary to place them on the stand since expert questioning of the plaintiff's doctor, if he went along with the case, brought an admission of the diagnostic nature of the hospitalization.

Blue Cross Rejection Study for Three Year Period

	1955		*1956*		*1957*	
Total cases processed	72,678		92,450		108,042	
Total cases rejected	3,126		4,729		5,430	
	DA	PE	DA	PE	DA	PE
Total cases rejected	169	741	350	1175	1036	1221
Per cent of rejected cases to total processed	0.2%	1.02%	0.4%	1.3%	1.0%	1.13%
Per cent of rejected cases to total rejected	5.4%	23.7%	7.4%	24.8%	19.1%	22.5%
Net gain or loss for year	+$401,000		—$117,000		+$373,000	
Per cent gain or loss for year	Gain 4.8%		Loss 1.1%		Gain 2.7%	

It is regrettable that any case must ever reach the courts. Each is likely to hurt our public and personal relations. With this in mind, for years we stayed out at all costs. Finally, it was necessary that we demonstrate that certain individuals could not force payment of unjust claims by the simple filing of a small claims suit with a $5.00 deposit. Many of these suits cost more to defend than to pay, but by successful defense the nuisance suit has been discouraged, and recalcitrant doctors have been shown that their word is not necessarily law, if it cannot be supported by fact.

Concurrent Care

Concurrent care presents a growing problem. There is an appalling lack of understanding on the part of the doctors that, with modern attitudes and expenditures patients cannot afford multiple doctors for concurrent care. Since insurance creates no new money, but only pays out what is paid in by policyholders, it cannot pay for such coverage. With multiple doctors indicated on a case, an attempt is made to pay them. When there are over-all limitations in the amount in a single hospitalization and those limitations must be considered in the payment to these doctors, it is imperative that doctors indicate when others are assisting in the care of a patient, and that they adequately describe the necessity for concurrent care. Unless this is done, it cannot be considered for payment by insurance.

Many policies are protected by simply stating that only one doctor may be paid during a hospitalization. Blue Shield has not done that. There have been numerous cases in which payment was made above the limits of the "J" Contract, because it was considered to be "necessary care." With the offering of new contracts with wider coverage, the payments of amounts in excess of the "J" Contract must be curtailed. We doctors must consider the fact that if we are to specialize in a limited field and attain unusual competence in that field, we may be able to charge larger amounts for our services. We must, however, also consider whether or not our limitations have created a demand for another doctor who would not ordinarily be on the case and who in turn will make added charges on the patient. It is possible that our values need readjustment as much as those of our patients. Let us be realistic in our approach to this problem.

Some have said that we encourage dishonesty in the recording of hospital data. That may be true, since a dishonest person, be he patient or doctor, will sometimes go to any extreme to reach his end. It is up to us of the medical profession to put a stop to such practices when they are discovered, all the more reason for the doctor to remain in this insurance field. Thus far, we have been lax in policing our ranks. Unless we are willing to do a better job of it, our minorities may be our Waterloo.

The Claims Committee was confronted with such increasing numbers of questionable claims that permission was recently secured from the Blue Shield Board to submit the worst of these to local grievance committees for their consideration. And, accordingly, we have suggested to several doctors that if they were not satisfied with the decision of the Claims Committee, they could submit their problem to the local hospital audit committee, where one exists, or to the grievance committee. Serious consideration will be given to their decisions if they demonstrate a desire to review all facts and give them their conscientious deliberation. This is another opportunity for medicine to solve its own problems. Many decisions must be based on the necessity of the hospitalization. Local groups can decide this better than distant ones IF THEY WILL, but if they refuse to accept this responsibility, government will do it for us in more ways than one.

Regimented medicine in any form is not desirable, but it has been forced upon us by changing times and our own omissions. It is part of the great "averaging" of our present civilization in that fee schedules make no allowances for competence. Fee schedules, however, seem to be a necessity for the protection of the honest and humane doctor and patient. It seems far better for us to regulate ourselves in such a way that we maintain a reasonable control over our destiny rather than have politicans and bureaucrats take us over. It is late; it is imperative that we cooperate and that we regulate, if we are to continue to practice a certain amount of free medicine.

415 Medical Arts Building.

ABSTRACTS

The Present Status of Endometriosis. By William Wickman and Timothy A. Lamphier. Postgrad. Med. 23:598-604 (June) 1958.

Although benign in every sense of pathologic interpretation, endometriosis causes extremely disabling symptoms and frequently is particularly difficult to treat. Because its incidence seems to be increasing, and since it affects relatively young women in the childbearing age and leads to considerable discomfort and disability, the authors investigated the present status of the disease by analyzing a series of 175 cases of proved endometriosis observed in several hospitals in the Boston and Miami areas. In summarizing their observations and conclusions they stated that the disease usually can be diagnosed if one suspects the possibility of its occurrence and looks for the cardinal symptom and the pathognomonic sign. The cardinal indication is the progressive accumulation of symptoms associated with the menstrual period. The pathognomonic sign is an indurated, immobile, invasive endometrioma that is tender during menstruation.

It has been emphasized that early marriage and frequent pregnancies may be an important factor in decreasing the incidence of this disease. The progress of endometriosis can be reversed by ovarian deactivation. Because the lesions of endometriosis can be seen long before they can be felt, one should be as radical about advising operation as the surgeon should be conservative about castrating when he explores the abdomen. Hormonal therapy should not be used unless the diagnosis has been confirmed by an exploratory operation. This therapy should be used only for a limited time. In general, patients less than 40 years of age should be treated by a conservative type of operation; patients more than 40 years old should be treated by more radical surgery. None of the theories advanced to explain the cause of endometriosis has been proved conclusively.

Initial Clinical Trial of the Nitrogen Mustard Analogues of Chloroquine and Quinacrine: A Preliminary Report. By Ralph Jones, Jr., Ulfar Jonsson, Melissa Browning, Howard Lessner, C. C. Price, and A. K. Sen. Ann. New York Acad. Sc. 68:1133-1150 (April 24) 1958.

Studies of the human pharmacology of nitrogen mustard analogues of the antimalarial durgs chloroquine and quinacrine conducted in patients with advanced malignant disease are here described. Chloroquine mustard administered parenterally had as its limiting toxic reaction a profound effect on the central nervous system, manifested by the production of paresthesias, toxic psychosis, and convulsions. When chloroquine mustard was administered intramuscularly in doses of 0.2 to 0.4 mg./kg., there was preliminary evidence suggestive of some chemotherapeutic activity against neuroblastoma, leukemia, and the solid lymphomas. Quinacrine mustard produced severe gastrointestinal irritation, and was probably not absorbed in an active form when administered by mouth. When administered parenterally, the limiting toxic reactions were local irritation and bone marrow depression. In patients who were treated parenterally, there was limited preliminary evidence suggestive of chemotherapeutic activity in two patients with multiple myeloma and in one patient with chronic lymphatic leukemia.

Urticaria Pigmentosa: Report of a Case with Autopsy Examination. By Robert J. Davis, M.D., and Morris Waisman, M.D. A. M. A. Arch. Dermat. 79:649-650 (June) 1959.

To authenticate the fact that the skin may be the organ exclusively involved in urticaria pigmentosa, even when of severe degree, the authors report a case of congenital urticaria pigmentosa in an infant, studied clinically and at autopsy. In this instance, although the skin was classically and maximally infiltrated with mast cells, no evidence of concomitant involvement was detected internally. The possibility that visceral or skeletal lesions of mastocytosis might have developed later in life cannot, of course, be disavowed.

Members are urged to send reprints of their articles published in out-of-state medical journals to Box 2411, Jacksonville, for abstracting and publication in The Journal. If you have no extra reprints, please lend us your copy of the journal containing the article.

PRESIDENT'S PAGE

Time Marches On

The third and last resolution which I proposed for your consideration at the New Year was:

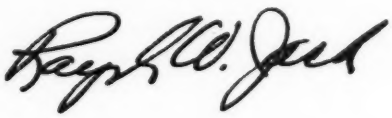
"FURTHER BE IT RESOLVED that we work as diligently and as constantly as our adversaries to do everything we can to preserve the freedom of our profession and also the freedom of all men."

In a very few days we will open the Eighty-Sixth Annual Meeting of the Florida Medical Association. That is the time each year that we do our most serious thinking as a group. It is the time that we most commonly make our most important decisions. It is when we approve or disapprove, accept or reject, the previous year's work and efforts of our officers, Board of Governors and various committees as well as the proposals of our component county societies. I can think of no time more appropriate for us to consider seriously the meaning of our New Year Resolution.

This is the time when we consider all of our resolutions for the year. Let us begin our eighty-seventh year well by following our New Year Resolution and completing the work of our eighty-sixth year in a positive way that becomes the dignity of our profession. The welfare of the Medical Profession is one of our trusts. A more important responsibility is the welfare of all men. Let us, as we consider our problems, think of what is best for our immediate community—our own State of Florida, our national community—the United States of America, as well as what is best for the people of the world.

If we devote our deliberations and attentions and if we work diligently always for what is best for our particular wards—the humans on this earth—we will not have to worry about what will happen to or what will happen for our profession. A grateful public will look after us as they have those before us and the medical profession will remain one of great dignity and esteem.

The time has come for me to say farewell. I hope that your retiring administration has added another rung to our ladder of progress. It has been said, "One can see far when he stands on the shoulders of his predecessors." We are deeply grateful for the help we received from those before us and we hope we have given at least a little boost for the start of your new team.



THE JOURNAL
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Hemoglobin

Once upon a time, hemoglobin was the stuff that made blood red and, when it was low, required replenishing with iron to rid the patient of fatigue, weakness, and impotence.

From the burgeoning reports of recent years, it now appears that hemoglobin is pretty complicated stuff and can be any one or a combination of components currently designated alphabetically from A through N. Just as there are no J-birds in the Army, there is no B hemoglobin, S hemoglobin having been given this position in the hierarchy.

The hemoglobin existing in most adults and children past the age of 10 months, and therefore presumably "normal" hemoglobin, is Type A. Except as noted below, Type A hemoglobin migrates most rapidly on filter paper electrophoresis and constitutes the reference point for describing the electrophoretic mobilities of the "abnormal" hemoglobins. Type A hemoglobin can be separated further into four subcomponents by starch-block electrophoresis, A-1 being the most abundant and hence the so-far ultimate "normal." Fraction A-2 is consistently increased in thalassemia states.

Hemoglobin S is the abnormal hemoglobin found in the well known sickle cell diseases: the S-trait and S-anemia. The characteristic cell is identified by the classic sickle cell preparation and by the faster sodium metabisulfite method. S migrates less rapidly than A and more rapidly than C on electrophoresis. Recent case reports indicate that the usually innocuous S-trait can be responsible for gross hematuria, as well as for splenic infarctions during airplane flights and typical sickle cell crises after dehydration and/or anoxemia. In sickle cell anemia, recent therapeutic advances include the slow intravenous infusion of 80 to 120 cc. of *one* molar sodium lactate to abort painful crises and the maintenance of the total hemoglobin above 10 Gm. per hundred cubic centimeters by transfusions to heal lower leg ulcers.

Hemoglobin C is transmitted genetically in the same fashion as S, so that the heterozygous C-trait and the homozygous C-disease exist. The characteristic but not pathognomonic red cell of the C states is the target cell. C moves most slowly of all the hemoglobins on filter paper electrophoresis. Patients with C-trait are asymp-

tomatic. In the few reported cases of homozygous C disease the patient usually has a chronic anemia and splenomegaly, but does not have hemolytic crises.

Hemoglobin D is rare and migrates electrophoretically in the same position as S. It is differentiated from S by different solubilities in phosphate buffers and by the inability to produce sickling.

Hemoglobin E is indigenous to Thailand and environs, and, therefore, of little local importance.

Hemoglobin F or fetal hemoglobin is identified by the alkali denaturation test. It occurs normally in the newborn as 60 per cent to 80 per cent of the total hemoglobin. The concentration gradually drops and is replaced by A or other hemoglobins until it has practically disappeared, in all but a rare individual, by the age of nine or 10 months. Hemoglobin F may reappear as 5 per cent to 10 per cent of the total hemoglobin in adults suffering from severe anemias of various etiologies. It is increased particularly in sickle cell anemia and in patients with combinations of other abnormal hemoglobins, and is characteristically elevated in the thalassemia states.

It is axiomatic that a combination of two abnormal hemoglobins in a single individual confers a clinical situation more serious than the relatively innocent C or S traits but less dangerous than the homozygous S anemia. In sickle cell-C disease and microdrepanocytosis (the sickle cell–thalassemia combination), however, painful and even fatal hemolytic crises have occurred. Other reported complications include pulmonary infarctions, aseptic necroses of the femoral head, and severe anemias of pregnancy.

Hemoglobins G through N are rare, migrate faster than A electrophoretically, may impose a mild anemia on the host, and are of little clinical importance.

The fine molecular structure of three of these hemoglobins, A, S and C, have been determined. If one breaks down the globin portion of the hemoglobin molecule into its polypeptide fractions and further into its amino acid constituents, one finds that they differ in only one amino acid of the more than 300 such in each molecule. It is simply awe-inspiring to know that this difference of one molecule can determine the health and even the fate of an entire human organism.

Thus, the current investigations of the hemoglobinopathies, a tiny segment of the broad field of medicine, are bringing new light into the dark jungles of the study of human genetics, hematologic pathophysiology, and the molecular concept of disease.

BARKLEY BEIDLEMAN, M.D.

"Symptomatic Medicine"

"Symptomatic medicine" has acquired the reputation of poor medicine, of the dispensing of a series of pills to relieve a succession of complaints in a patient with an undiagnosed or incurable illness. It is generally referred to apologetically by the doctor in charge of the case, or condescendingly or scathingly by another doctor reviewing the case. Is such an attitude justified? Why should not the patient's symptoms be relieved?

The present century, because of the astounding advances in diagnostic techniques and in surgical and pharmacologic methods of cure, has witnessed a change in the goal of the medical profession. Cure of the disease, or, if that is not possible, restoration of maximum function, is now the aim, rather than alleviation of suffering while the disease runs its course in the patient. It is true that if the disease is properly diagnosed, and if a specific remedy is available and properly prescribed, then the symptoms caused by the disease will abate and eventually disappear as the disease is healed, and a change in the symptoms may be a useful gauge of the progress of the treatment.

But what of the many symptoms caused by "stress" or "tensions" or by unknown disorders? The patient may obtain some relief by learning that his headache is caused by tension or sinusitis rather than the brain tumor he feared, but he will still expect some more direct relief while awaiting the benefits of measures directed toward

the underlying condition. If such relief is not forthcoming, the less tolerant or less patient patient will seek help elsewhere—which explains why the quack and the cultist still flourish in this age of medical miracles.

One other point should be made. It is often thought that "symptomatic medicine" is easy—that the relief of a symptom is a simpler achievement than cure of a disease. This is far from true, for the proper evaluation of a symptom involves a thorough grounding not only in physiology but also in the psychology of the doctor as well as the patient, and prescribing for the symptoms presupposes an up-to-date knowledge of pharmacology.

The relief of symptoms is still the principal desire of patients coming to the physician. There should be no shame or stigma attached to granting such relief, provided the cause of the symptoms is understood. For a remarkably lucid and complete exposition on this subject the interested reader is referred to Dr. Walter Modell's monograph.[1]

1. Modell, Walter: The Relief of Symptoms, Philadelphia, W. B. Saunders Company, 1955.

J. M. P.

The Functions of an Intern And Resident Committee

In the past 10 years there has been a marked change in the thinking of the average senior medical student as he looks for the internship which best suits his needs. Formerly, most appointments were arranged by the faculty advisor, but with the development of the intern matching program, the student found that he could command greater consideration and advantages for himself as the price for his acceptance of an internship. This has led to many needed and desirable improvements in the intern's life, but has also created the intern who is entirely or primarily interested in the material benefits to be obtained during this period of his training.

Recognizing these changes and accepting the desirable and progressive ones, we continue to believe that facilities for patient management in an atmosphere of congeniality with good supervision by an interesting attending staff at an institution that provides facilities for investigative work and cares for the physical needs of the house staff will attract desirable interns.

On this premise, all senior students who contact a hospital regarding internships should be encouraged to visit and thoroughy inspect the institution. This visit should be chaperoned by a member of the house staff who has no advance notice of the visit or instructions concerning the conduct of the visit. The student should see the physical plant, learn of the nursing service, inspect the laboratory facilities, and determine the degree of supervision by the attending physician upon each service as well as the caliber of these physicians. He should observe the type and variety of clinical material, the posted on call service, the living quarters and the eating facilities, and above all—by association with his guide and the other members of the house staff with whom he comes in contact—he should *feel* the disposition of the staff.

This intangible disposition of satisfaction or dissatisfaction with one's work is most important to each prospective intern or resident, for this is the end result of a service which, recognizing its minor deficiencies, constantly tries to correct them and to achieve a satisfying and rewarding experience.

Within the administrative office questions of stipend, job opportunities for wives of the married interns, local costs of living, hospital statistics, and the policies of the administration in regard to the house staff should be answered.

Whenever possible the applicant should talk with a member of the attending staff to determine the potential of the training program in which he will undertake his first patient responsibility. The staff members contribute their services because of the enjoyment derived from teaching, and their enthusiasm can communicate itself to the applicant for internship. In turn, this contact with the young men and women of medicine is a stimulus which helps to maintain the

interest of the attending staff. The hospital intern committee should encourage this contact and perfect a program which places patient responsibility directly upon the house staff with the attending staff in an ever present advisory capacity.

The intern and resident committee should further encourage a well rounded hospital experience including facilities for experimental medicine and research. With such an organization the hospital can offer a training program rarely available except in the larger teaching centers.

Such a committee should be young enough to understand the many problems which beset the intern and to encourage free discussion of these problems. This rapport insures the rapid correction of unrest and prevents smoldering resentments which may wreck morale.

In summary, the intern who accurately assesses his hospital's potential as well as what it expects from him before making his choice is more apt to be a contented, industrious and well oriented individual. The strength of a residency program is dependent upon the caliber of interns available for residency training selection. The level of a hospital's performance is determined by the ability of the house and attending staffs and their cooperative effort.

It is the goal of the intern and resident committee to assure this effective cooperation through dedication, devotion and industry to the end that hospital staff interns and residents and the patients shall enjoy the benefits of the training program.

THAD MOSELEY, M.D.

Rehabilitation
The Third Phase of Medicine

HOWARD A. RUSK, M.D.
NEW YORK

One of the greatest advances that has been made by medicine and surgery in the past two decades is the new acceptance of a third dimension of medical and surgical responsibility—rehabilitation. There is no more eloquent testimony not only of medicine's acceptance of this responsibility, but also of the acceptance of all professions, of government at all levels, of industry, of the public and of education than the two reasons we are gathered here this week end—the new College of Health Related Services and the Rehabilitation Area of the Teaching Hospital and Clinics of the J. Hillis Miller Health Center.

Rehabilitation has frequently been termed the "third phase of medicine," following "preventive medicine" and "curative medicine and surgery." It is that period when the "fever is down and the stitches are out," the period "between the bed and the job." In contrast to "convalescence," in which the patient is left alone to let nature and time take their course, rehabilitation is a dynamic concept in which the skills of the rehabilitation team consisting of the physician, physical therapists, occupational therapists, nurses, social workers, counselors and other trained personnel are integrated as a single force to assist the patient in reaching the maximum of his physical, emotional and social and vocational potentials.

The first objective of rehabilitation is to eliminate the physical disability if that is possible; the second, to reduce or alleviate the disability to the greatest extent possible; and the third, to retrain the person with a residual physical disability "to live and to work within the limits of his disability but to the hilt of his capabilities."

Until the last 50 years, the saving of human life as the traditional and cherished goal of medicine was largely a matter of saving individual patients. With the first half of the Twentieth Century, the whole character of medicine's traditional goal was changed. The expansion of research into the etiology and therapy of communicable and infectious diseases "struck specifics."

Professor and Chairman, Department of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, New York City; Associate Editor, The New York Times; Past President, International Society for the Welfare of Cripples; President, The World Rehabilitation Fund.

Abstract of an address delivered at the formal recognition of the College of Health Related Services and Rehabilitation Area of the Teaching Hospital and Clinics, J. Hillis Miller Health Center, Gainesville, Fla.

The establishment of new and effective public health measures and the rich findings in the basic fields reported elsewhere gave the life-saving functions of medicine mass proportions.

These combined with similar advances in greater availability of medical and hospital care, improved nutrition, increased education, better housing and all the contributing factors to our unprecedented current standard of living mean hundreds of thousands of persons are alive today who would have died at the turn of the century with the same medical problems. Yet many of them have not come out unscathed. They have survived only to find themselves confronted with residual disability. The paraplegic whose back is broken in a fall does not die today as he would have 50 years ago. He has strong arms, an active mind and a burning desire to live the best life he can with what he has left. Antibiotics control the upper respiratory and urinary infections of the severely involved cerebral palsied youngster who would have succumbed before their development. He seeks his place in society. The survivors of infection get their share of the degenerative diseases. These are present day problems which must be solved.

The day to day experience of all practicing physicians shows not only that there has been a substantial increase in the gross number of disabled persons, but also that a growing percentage of our population suffer from long term illnesses and substantial physical impairments.

During the past few years there has been a growing interest, both professional and among the public, in the development of rehabilitation services for the physically handicapped. This growth of rehabilitation services for the handicapped is a part of a total pattern of an expanding community, national and global consciousness of social welfare, which is reflected in similar advances in all educational, health, and social services.

As in all great social movements, this increased interest in rehabilitation has been a result of the impact and recognition of increased needs—in this instance, the rapid increase in the developed parts of the world of the incidence of chronic disability as a result of the increasing age of the population.

Although some nations of the world still have pressing problems of communicable disease, and life expectancy rates vary from nation to nation, depending on the availability of medical care, public health measures, food supply, and the general standard of living, the trend in all nations is toward a greatly increased life expectancy, with the result that throughout the world our population is gradually becoming older.

At the same time that the average age is advancing in the developed parts of the world, a new concept of the dignity of man and the value of the worth of the individual is beginning to emerge in those nations of the world which do not have the benefits as yet of modern programs of public health and medical care. This new concept of the worth of the individual has been symbolized, and is finding its expression in many instances in the desire of these nations to institute programs of services for their physically handicapped.

Rehabilitation has been defined as the ultimate restoration of the disabled person to his maximum capacity—physical, emotional, social and vocational. Implicit in this definition is the need for a team whose members can bring together a wide variety of skills and understandings. No one profession can furnish all the services needed. Rehabilitation is, rather, an area of specialized activity within a number of professional disciplines.

The Physician's Responsibility

Until recent years, the great majority of the medical profession looked upon rehabilitation as an extracurricular activity of medicine, something dealing with social work and vocational training, but something which they had little concern, and which held but few implications for medicine. Today, however, that trend is being reversed, and although there are still many physicians who are unfamiliar with the aims and procedures of rehabilitation, more and more medicine is beginning to recognize that medical care cannot be considered complete until the patient with a residual physical disability has been trained "to live and work with what he has left." Except in a few isolated instances, the physically handicapped person must be retrained to walk and travel, to care for his daily needs, to use normal methods of transportation, to use ordinary toilet facilities, to apply and remove his own prosthetic devices and to communicate either orally or in writing. These are such simple things that they are frequently overlooked, but the personal, vocational, and social success of the handicapped person is dependent upon them.

The practice of rehabilitation for the general practitioner, for the orthopedic surgeon, or for

any doctor, begins with the belief in the basic philosophy that the doctor's responsibility does not end when the acute illness is ended or surgery completed; it ends only when the individual is retrained to live and work with what is left. This basic concept of the doctor's responsibility can be achieved only if rehabilitation is considered an integral part of medical services. Any program of rehabilitation is only as sound as the basic medical and surgical service of which it is a part. The diagnosis and prognosis must be accurate, for it is upon them that the feasibility of retraining is determined.

Rehabilitation Services in Hospitals

Although some outstanding rehabilitation programs in various parts of the world have demonstrated that rehabilitation to the point of self care and even to full or limited employment is possible for many of the chronically ill who have been hospitalized for long periods, patients in few hospitals receive comprehensive rehabilitation service. Hospitals complain that the chronically ill are responsible for their overcrowded state, but few of them provide the third phase of medical care which will permit many of these patients to leave the hospital.

It is only within the general hospital that such services can be brought to the patient at the earliest possible time, and costly and damaging physical, emotional, social and vocational sequelae of the acute disease process or trauma be alleviated or minimized.

To ignore the development of rehabilitation services within general hospitals is to guarantee the continued deterioration of many less severely disabled persons until they, too, reach the severely disabled and totally dependent category. The neglect of disability is far more costly than an early aggressive program of rehabilitation which restores the individual to the highest possible level of physical, economic, social and emotional self sufficiency.

Nearly 14 years of experience in the first comprehensive rehabilitation in a general civilian hospital (Bellevue Hospital, New York City) together with extended observation and study of other general hospitals indicate that rehabilitation services within the hospital can best be provided by the organization of a "bed service" which has a relationship to the other hospital services similar to that of the x-ray and laboratory divisions.

For example, in Bellevue Hospital the rehabilitation service provides consultants for such other major services as orthopedics, pediatrics, surgery, and neurology. Its resident and visiting staff regularly makes rounds with the resident and visiting staff of these services. Its staff may, for example, see a patient in consultation before his leg is removed, indoctrinating him as to what he must expect, why he cannot keep his stump on a pillow, why he has to lie on his abdomen. Medical responsibility during the period of definitive care, of course, rests with the initial or admitting service. As soon as the stitches are removed, the patient is transferred to a rehabilitation ward. At this time, the rehabilitation service assumes the major responsibility for his care, fitting of the prosthesis, and training in its uses. The roles are now reversed; the surgical service has become the consulting service.

Prior to the actual transfer of the patient to a rehabilitation ward, however, he attends one of the rehabilitation service's semiweekly evaluation clinics, where his problem is analyzed and discussed by all members of the staff—physical therapists, occupational therapists, nurses, vocational counselors, speech therapists, social workers and psychologists—as well as resident and visiting medical staff. The decision as to the feasibility of transferring the patient to the rehabilitation service is then made on the basis of the service's ability to contribute to his over-all physical, emotional, social and vocational rehabilitation.

Rehabilitation during the first quarter of the century was characterized by the development of orthopedic surgery, physical therapy, and occupational therapy, all outgrowths of World War I. Under the stimulus of World War II, the second quarter of the century has seen a recognition that the problems medicine faces in meeting the growing incidence of chronic disease and disability extend far beyond any medical specialty; they are problems which must be faced and solved by medicine as a whole. The concept of rehabilitation and the basic techniques must be made a part of the armamentarium of all physicians, for regardless of the type of disability, the responsibility of the physician to his patient cannot end when the acute injury or illness has been cared for. Medical care is not complete until the patient has been trained to live and to work with what he has left.

If any major attack is to be made on the problems of chronic disability, the general hospital

and the individual practicing physician must be the focal points of that attack. It is only in doctors' offices and in general hospitals that such services can be brought to the patient at the earliest possible time and that the costly and damaging physical, emotional, social and vocational sequelae of the acute disease process or trauma may be alleviated or minimized.

Rehabilitation of the chronically ill and the chronically disabled is not just a series of restorative techniques—it is a philosophy of medical responsibility. Failure to assume this responsibility means to guarantee the continued deterioration of many less severely disabled persons until they, too, reach the severely disabled and totally dependent category. The neglect of disability in its early stages is far more costly than an early aggressive program of rehabilitation which restores the individual to the highest possible level of physical, economic, social and emotional self sufficiency.

The new College of Health Related Services and the Rehabilitation Area of the Teaching Hospitals and Clinics of the J. Hillis Miller Health Center will make a significant contribution not only in Florida, but throughout the Southeast, nationally and internationally to the more widespread practice of the philosophy of rehabilitation.

400 East Thirty-Fourth Street (16).

Midwinter Seminar Of Ophthalmology and Otolaryngology A Popular Attraction

The fourteenth annual Florida Midwinter Seminar of Ophthalmology and Otolaryngology was held at the Americana Hotel in Bal Harbour, Miami Beach, from January 24 to January 30, 1960. Again this year there was an unusually large number of registrants from throughout the nation with about 350 physicians in attendance. These physicians represented about 45 states, the District of Columbia and several provinces of Canada. Florida had the largest delegation with 78 physicians present, and the state of New York was a close second. There were heavy representations from the other Northern states as well as from the Midwest. A small number of registrants came even from the far Western states including California.

This year the first three days were devoted to ophthalmologic papers and the last three days to otolaryngologic papers. In between the interesting papers there were over 20 interesting exhibits to be studied. All of the 30 papers presented were of great interest to the doctors in attendance, and a large amount of unpublished material was presented.

In the section on ophthalmology, Dr. Bernard Becker, of St. Louis, reported on his findings in glaucoma, a field in which he has performed over 40,000 electrotonographic examinations. He presented strong evidence indicating that glaucoma is inherited, with it being detected in about 15 per cent of patients who had members of their family with glaucoma. He also discussed some of the newer medicines, both miotics and secretory inhibitors, and their use in treating glaucoma.

Dr. David G. Cogan, of Boston, gave an excellent presentation on what examinations of the eye tell about systemic diseases and how their recognition and prognosis can be aided by the ophthalmologist.

Dr. Robert N. Shaffer, of San Francisco, led interesting discussions on the use of the gonioscope as well as diagnosis and treatment of congenital and secondary glaucomas.

Dr. Joseph A. C. Wadsworth, of New York, presented many interesting facets of little known vitreous syndromes as well as the difficult diagnostic criteria of macular lesions.

Dr. Frank B. Walsh, of Baltimore, discussed numerous neuro-ophthalmologic subjects relating to bilateral sudden blindness and muscle palsies and also presented special selected case reports.

In the otolaryngologic section Dr. Howard P. House, of Los Angeles, presented the most startling data in his discussion of the inner ear. It has been shown that dihydrostreptomycin is toxic and has brought about some cases of incurable nerve deafness. It is his recommendation that dihydrostreptomycin not be used at all, and he reported that it had been taken off the market by many of the drug houses.

Dr. Merle Lawrence, of Ann Arbor, Mich., presented several talks on the physiology of hearing, to the edification of all present.

Dr. Joseph H. Ogura, of St. Louis, discussed many new and interesting facets of head and neck surgery in relation to cancer of the larynx, pharynx, and esophagus.

Dr. Maurice H. Cottle, of Chicago, presented several new aspects of rhinitis and sinusitis with

especially a new premaxilla-maxilla approach in septum surgery.

Dr. Lawrence Boies, of Minneapolis, discussed some of the indications for sinus surgery as well as neurologic lesions in otolaryngology.

After this most interesting week's meeting, the doctors returned to their respective homes well rested and enlightened and looking forward to an even more interesting program next winter.

T. S. E.

Sixth Biennial Cardiovascular Seminar Set for April 27-30 at Miami Beach

The Sixth Biennial Cardiovascular Seminar will be held at the Balmoral Hotel on Miami Beach April 27 through 30, 1960, Wednesday through Saturday. It will again be cosponsored by the Heart Association of Greater Miami, the Florida State Board of Health, and the Florida Heart Association. In conjunction with the Seminar will be the Annual Meeting of Membership, and the Staff Conference of the Florida Heart Association, also set for the Balmoral.

Seminar hours have been set from 9:00 in the morning until 2:00 in the afternoon to allow registrants, participants, and their families to enjoy the beach in the spring. Sixth in the series begun in 1950, the Seminar is expected to reach a record attendance, with a roster of 13 of the world's outstanding men in the field of cardiovascular disease.

The faculty includes Dr. E. Grey Dimond, Professor and Chairman of the Department of Medicine at the University of Kansas Medical Center, and Director of the Cardiovascular Laboratory there; Dr. Harriet P. Dunstan of the Cleveland Clinic, well known for her contributions to research in the field of hyptertension and a member of the American Heart Association Council for Hypertension Research; Dr. William T. Foley, Associate Professor of Clinical Medicine at Cornell University College of Medicine, and noted for his many contributions in the field of anticoagulants; Dr. Charles K. Friedberg, Senior Attending Physician and Chief of Cardiology at Mt. Sinai Hospital in New York City, editor of the textbook "Diseases of the Heart" and of the publication, "Progress in Cardiovascular Disease," and on the Editorial Board of "Circulation" magazine.

Other members are Dr. Dwight E. Harken, Surgeon and Chief of the Department of Thoracic Surgery at Mt. Auburn and Malden Hospitals in Boston, Surgeon to the Peter Bent Brigham Hospital in Boston, and Consultant in Thoracic Surgery to the Veterans Administration Hospitals in Massachusetts, and a Founder of the Board of Thoracic Surgery; Dr. John B. Hickam, Professor and Chairman of the Department of Medicine at the Indiana University Medical Center; Dr. Robert M. Hosler, Associate Director of courses in Cardiac Resuscitation at the New York Academy of Medicine and in Cleveland, and author of a well known manual on cardiac resuscitation; Dr. Bernard Lown of the Harvard University School of Public Health where he is currently Associate in Medicine in the Department of Nutrition at Harvard and Peter Bent Brigham Hospital; and Dr. James Metcalfe of the Boston Lying-In Hospital and Assistant Professor of Medicine at the Harvard Medical School.

Additional faculty members are Dr. Clark H. Millikan of the Mayo Clinic, Professor of Neurology of the Mayo Foundation, Graduate School, University of Minnesota; Dr. Eugene A. Stead, Jr., Chairman of the Department of Medicine at the Duke University School of Medicine, and Physician-In-Chief at the Duke Hospital in Durham; Dr. Demetrio Sodi-Pallares, Chief of the Department of Electrocardiography at the National Institute of Cardiology in Mexico City, and Professor of the Cardiovascular Clinics at the National University of Mexico; and Dr. W. Jape Taylor, Assistant Professor of Medicine at the College of Medicine of the University of Florida, and member of the Board of Directors and the Professional Education Committee of the Florida Heart Association.

Physicians are urged to register promptly with the Heart Association of Greater Miami, 2 S. E. 13th Street, Miami 32, Florida. The registration fee for the Seminar will be $25.00, which will not include luncheons, separately priced at $3.00 each. Registrants from outside the Miami area who wish may make reservations at the Balmoral Hotel, and will be given a special rate for the duration of the Seminar, including two days before and two days after. At the time of registration, each participant will have the opportunity to specify which of the discussion groups he wishes to participate in. Luncheons each day will feature a two hour panel, during which members of the morning's faculty will answer questions from the audience.

Dedication Ceremonies For New Research Building

"Town and gown are partners in medical education," Dr. John H. Talbott said in his dedicatory address for the new Research Building of the University of Miami School of Medicine on March 3. Under a gala tent, an audience of more than a thousand Miamians interested in medical education heard Dr. Talbott outline the responsibilities of organized medicine to medical education and the relationships which should be realized through this partnership.

After Dr. Talbott's talk, R. B. Gautier Jr., former Florida senator, replied to the challenge and expressed the hope that the great medical potential of Miami would be realized and that the medical school, now past its infancy, would develop into one of the world's great medical centers.

Mr. Gautier spoke for the Council of the School of Medicine, a group of prominent Miami business and professional leaders who are seeking to raise funds for the completion of the perma-

Dr. John H. Talbott, principal speaker at the dedication, and Editor of The Journal of the American Medical Association.

Dr. John C. Finerty, Chairman of the Department of Anatomy, checks condition of animals moved to the new research building from temporary warehouses.

New Research Building, University of Miami School of Medicine.

nent buildings of the school. A new basic science building to replace the temporary facilities leased from the Veterans Administration Hospital in Coral Gables is the council's first objective.

The Research Building, located at 1600 N.W. 10th Avenue, Miami, is part of the Metropolitan Medical Center. It has been under construction since May 1958, and contains 90,000 square feet of laboratory space. The building cost over two million dollars to build and another quarter of a million dollars to equip. The funds were obtained from the United States Public Health Service and from Dade County and University sources.

The School of Medicine now has 150 research projects under way, with grants of more than two million dollars annually for their support. Many of these projects have had to be housed in temporary and inadequate quarters all over Dade County. Warehouses, old barracks buildings and empty stores have all been pressed into service. Each department of the School of Medicine has been looking forward to the facilities now available in the modern, air-conditioned, spacious structure. The building is designed so that it may be joined to a future basic science building, to be constructed when funds are available.

Daniel J. Mahoney, chairman of the University of Miami Board of Trustees, presided at the dedication ceremonies. Brief statements were made by Dr. Jay F. W. Pearson, President of the University, and Dr. Homer F. Marsh, Dean of the School of Medicine. Also introduced were Mr. Francis Schmehl, representing the Department of Health, Education, and Welfare, Mr. Ben McGahey, Chairman of the County Commissioners of Dade County, and Hoke T. Maroon, Miami banker and chairman of the Medical School Council.

The dedication ceremonies were planned by a committee of almost 100 people, under the chairmanship of Dr. Robert B. Lawson, Professor and Chairman of the school's Department of Pediatrics. Mr. Maroon was co-chairman. Other members of the planning committee were: Program, Dr. Ralph Jones Jr., Professor of Medicine, and Judge Ray Pearson; Printing, Dr. William B. Deichmann, Professor of Pharmacology; Invitations, Dr. George T. Lewis, Professor of Biochemistry and R. B. Gautier Jr.; Arrangements, Dr. W. A. D. Anderson, Professor of Pathology; Exhibits, Dr. David S. Howell, Assistant Professor of Medicine; Hospitality, Mrs. James H. Ferguson and Mrs. Herman Boughton; Guides, Mrs. Fred F. Ravlin; and Hostesses, Mrs. Karl Slotta. Members of the Medical School Council served on all committees. The theme set for the dedication was Research Is the Key to Tomorrow. Guides and hostesses wore large gilt keys as emblems, and keys were used to decorate the exhibit and luncheon areas inside the building.

Dr. Gordon C. Ring, Chairman of the Department of Physiology, adjusts electronic equipment newly received for electrophysiology research.

More than 60 women took special training courses in order to be able to act as guides. The University faculty and staff were given a guided preview of the new building on March 2. Following the dedication ceremonies tours through the building were provided for the general public and during the week, several thousand people came through. Radio and television stations in the Miami area announced the hours of the tours frequently during the week prior to the dedication, and the School of Medicine used the opportunity to show visitors what kinds of new research projects are under way.

Exhibits were set up in tents in keeping with the atmosphere of the County Fair.

Inside the tent exhibits were set up on either side of a wide aisle. Note the use of platforms as the foundation for all exhibits.

Palm Beach County Medical Society Health Fair

The Palm Beach County Medical Society felt strongly that the ever increasing amount of health information in magazines, newspapers and television commercials today points to three important facts:

1. These news releases place before the public information of intimate interest and appeal.
2. They present confusing and often contradictory opinions on diagnoses and treatments.
3. They bring to the attention of the medical profession the tremendous need for general health education.

Two main mediums through which the public can be reached by the medical profession are health forums, which have proved to be popular and well attended, and health fairs. The advantages of health fairs over any other form of communication are being shown with each exhibit sponsored on a professional level.

Health fairs are a relatively new method of disseminating health information for the enlightenment of the general public, and the January 1960 Fair sponsored by the Palm Beach County Medical Society is the first such effort in Florida and the third in the nation. When the Palm Beach County Medical Society decided to have a Health Fair, it had two important decisions to make: (1) where to hold it, and (2) who should participate. It considered space available, ease of access and, most important, how to reach the greatest number of people. The considered decisions gave this exhibit the distinction of being the first Health Fair held in conjunction with a County Fair; the first to be held in a tent, with 8,000 square feet of exhibit area; and the longest run of any health fair up to this time, nine days.

Sixteen voluntary and official health organizations were invited to participate along with the allied medical groups which included the Palm Beach County Dental Society, Palm Beach County Veterinary Society, Palm Beach Pharmaceutical Society, and District 9 Nurses' Association. The voluntary and official organizations included: Palm Beach County Health Department, Visiting Nurse Association of Palm Beach County, American Cancer Society, Palm Beach County Blood Bank, Palm Beach County Association for Retarded Children, Palm Beach County Chapter National Foundation, Rehabilitation Center for Adults and Children, Palm Beach County Society for Crippled Children & Adults,

Palm Beach County Mental Health Association, Palm Beach County Tuberculosis & Health Association, Heart Association of Palm Beach and Martin Counties, Glaucoma Detection Clinic, Vocational Rehabilitation Service, Good Samaritan Hospital, St. Mary's Hospital, Florida Alcoholic Rehabilitation Program, Florida Council for the Blind, and Palm Beach County Chapter, American Red Cross.

One of the special features of this fair was the emphasis on careers in medicine and the allied medical sciences. Tours for high school students were an important part of the plan to convey information on career opportunities in the health fields. Free services offered included blood typing, chest x-rays, and a glaucoma detection survey which attracted crowds lined out to the midway. These services were strategically located to offer ample opportunity for all to take advantage without causing congestion in the general exhibit area. Among the 28 exhibits shown were those obtained from the American Medical Association, the Cleveland Health Museum, the United States Public Health Service, the United States Department of Agriculture, the Florida State Board of Health and other agencies.

In the initial planning for the Health Fair, the Palm Beach County Medical Society appointed a Health Fair Committee composed of chairmen of all major medical society committees; subcommittees to handle exhibit review, publicity review and doctor recruitment were selected. At the outset of planning a coordinator was appointed to take care of the many details involved in such an undertaking. This was Mrs. Ivan Schmidt, a member of the Medical Society's Auxiliary, who originally suggested the idea of the Health Fair. The importance of the coordinator cannot be stressed too strongly, because without such a person it would be impossible to carry out a project of this magnitude successfully. Valuable assistance in planning was received from the American Medical Association, the Florida Medical Association, the Florida State Board of Health and the Columbus (Ohio) Academy of Medicine.

The success of this project can be measured by the large attendance throughout the hours of operation which were 10 a.m. to 10 p.m. during the nine days of the exposition. Between 50 and 60 thousand people passed through the exhibits. The state and national interest which has been shown in this fair along with tremendous local enthusiasm is further indication of the value of this activity in furthering public relations and health education.

In planning this fair the importance of avoiding commercialism was emphasized, and an informative and scientific approach was stressed. The satisfaction and results of this undertaking are more than compensating for the effort involved.

CLARENCE L. BRUMBACK, M.D., *Chairman*
HEALTH FAIR COMMITTEE
PALM BEACH COUNTY MEDICAL SOCIETY

Florida Association of Blood Banks Holds Annual Meeting in Clearwater May 13 - 15, 1960

The annual meeting of the Florida Association of Blood Banks will be held at the Fort Harrison Hotel in Clearwater on May 13-15, 1960. An outstanding program has been planned by Dr. Lloyd R. Newhouser, President-Elect and the chairman of the Program Committee, and is as follows:

FRIDAY, MAY 13, 1960

8:30 p.m. Annual Business Meeting

SATURDAY, MAY 14, 1960

9:00 - 9:15	Welcome Address Dr. Walter H. Winchester, President-Elect, Pinellas County Medical Society
9:15 - 9:40	Licensing and Inspection of Blood Banks John T. Tripp, Ph.D., National Institutes of Health
9:40 - 10:15	Hemosiderosis Jacob Neber, M.D., Mount Sinai Hospital, Miami Beach
10:15 - 10:45	Discussion and view exhibits
10:45 - 11:15	Lions, Ostriches and Sheep Robert Klein, M.D., Blood Bank, College of Medicine, University of Florida, Gainesville
11:15 - 11:45	Transfusions and Hepatitis John R. Neefe, M.D., St. Petersburg Medical Clinic, St. Petersburg

2:00 - 2:30 Method for Checking Technician Crossmatches
D. B. Rulon, M.D., U. S. Naval Hospital, Key West
2:30 - 3:00 The Present Status of Bone Marrow Transfusions
James N. Patterson, M.D., Tampa
3:00 - 3:15 Exhibits
3:15 - 3:35 Disaster
Louis E. Pohlman, M.D., and Mary Rand, Central Florida Blood Bank, Orlando
3:35 - 4:00 Allergic Transfusion Reactions (A Review)
John B. Ross, M.D., Jacksonville Blood Bank, Jacksonville
4:00 - 4:20 Donor and Recipient Immunizations
Ed Landry, Laboratory Supervisor, John Elliott Blood Bank, Miami
4:20 - 4:45 Normal and Abnormal Platelets
Lloyd R. Newhouser, M.D., John Elliott Blood Bank, Miami

SUNDAY, MAY 15, 1960

9:00 - 10:00 Business Meeting
10:00 - 12:00 Round table discussion on Blood Bank Administration
Panel: Al Bloomingdale, Chairman, Miami; Carol Wilson, Jacksonville; Quinn Jordan, Phoenix, Ariz.; R. E. Hunter, Clearwater; and R. P. Tew, M.D., Lakeland
10:00 - 12:00 Technical Panel: Lloyd R. Newhouser, M.D., Chairman, Miami; John B. Ross, M.D., Jacksonville; Robert Klein, M.D., Gainesville; James J. Griffitts, M.D., Miami; Jacob Neber, M.D., Miami Beach; and Ed Landry, Miami

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Recognition Ceremonies University of Florida Rehabilitation Program

The Director of the Federal Office of Vocational Rehabilitation early in February termed the University of Florida's J. Hillis Miller Health Center "the most promising innovation in the development of national services for handicapped people." Miss Mary E. Switzer, keynoting recognition ceremonies for the newly established College of Health Related Services and Rehabilitation Area of the Teaching Hospital and Clinics, described the Health Center as "an outstanding example of the pattern of rehabilitation services and training of tomorrow."

"Here," Miss Switzer said, "you have planned and developed a unified program for training professional rehabilitation personnel on the basis of a brilliantly conceived and well-thought-out plan. At the same time, you are providing rehabilitative services to disabled people who need help in order to become active, working, producing citizens."

Miss Mary E. Switzer, Director of the Federal Office of Vocational Rehabilitation.

The formal recognition ceremonies were a highlight of a two day conference at the Health Center on February 5 and 6 with physicians, rehabilitation counselors, and professional people from other health-related professions on hand from throughout the United States. On Friday, February 5, the group heard Dr. Howard A. Rusk, Director of the Institute for Physical Medicine and Rehabilitation at New York University—Bellevue Medical Center.

Dr. Rusk said that the general hospital and the individual practicing physician must be the focal point of any future attacks on chronic dis-

Dr. Darrel J. Mase, Dean of the College of Health Related Services, University of Florida; Dr. Howard A. Rusk, Director of the Institute of Physical Medicine and Rehabilitation at New York University-Bellevue Medical Center; Dr. Alfred R. Shands Jr., Medical Director of the Alfred I. duPont Institute of the Nemours Foundation; and Dr. George T. Harrell, Dean of the College of Medicine, University of Florida (from left).

ability. "Neglect of disability in its early stages is far more costly than an early aggressive program of rehabilitation which restores the individual to the highest possible level of physical, economic, social and emotional self-sufficiency," he said.

Dr. Rusk, past president of the International Society for the Welfare of Cripples and currently president of the World Rehabilitation Fund, called rehabilitation the third phase of medicine —following "preventive medicine" and "curative medicine and surgery." He said one of the greatest advances that has been made by medicine and surgery in the past two decades is the new "acceptance of a third dimension of medical and surgical responsibility—rehabilitation."

Presiding over the activities was Dr. Russell S. Poor, provost of the Health Center. On hand to greet the visitors was Dr. Harry M. Philpott, vice president of the University of Florida. Prior to Miss Switzer's address, Dean Darrel J. Mase of the College of Health Related Services introduced his staff and the chairmen of the curricula in physical therapy, occupational therapy, medical technology and rehabilitation counseling.

Seemingly tremendously impressed with the Health Center and its facilities, Miss Switzer, who holds the top government position in rehabilitation, said, "This entire concept and the actual situation of the schools and the rehabilitation area is unique in our country and in the world. Here for the first time in history we have the basic rehabilitation teaching and service facilities under one roof and in close juxtaposition to all others that impinge upon the field. I consider this a great and most beneficial symbol of the future development of the services of rehabilitation."

Miss Switzer said the Office of Vocational Rehabilitation is proud of its support of the planning and development of the center and predicted that "the pattern you have laid out and put in practice here will be a guide to those who, as Florida has done, desire first to find out what is needed, then to proceed and meet that need in the most efficient manner possible."

"It should be heartening to all who want to help in overcoming the appalling burden of disability to observe what is done here. We have talked for years about the necessity for teamwork in rehabilitation. Here we have a built-in guarantee of continuing teamwork," the speaker said.

"The students in medicine, nursing, physical therapy, occupational therapy and rehabilitation

counseling are brought together from the beginning of their studies," Miss Switzer continued. "Each learns early the value and the function of the other. This inevitably will result in greater understanding among the members of the various professions and will engender the highest respect of each discipline for the skills and value of practitioners of the others.

"To the group which had the vision, first, to conceive and then to carry out this splendid effort, I tender not only the gratitude of the entire rehabilitation community but the unstinted admiration and applause."

Grants for Special Studies in Cancer

The application of existing knowledge of preventing and controlling cancer is being given added impetus this year through $1,500,000 appropriated by the Congress, the Public Health Service pointed out recently. This fund, earmarked for community cancer demonstration projects, is being administered by the Cancer Control Program, Bureau of State Services, Public Health Service, under the technical guidance of the director of the National Cancer Institute.

The types of projects believed to offer the best opportunities at this time for demonstrating better ways of providing community cancer control services are:

1. Professional and technical education in cytology.

2. Screening female beneficiaries of medical care for cancer of the cervix.

3. Selected educational projects, particularly public information and follow-up services, to emphasize the importance of periodic uterine cytology examinations.

4. Professional educational activities emphasizing the importance of including cancer diagnostic aids in complete health examinations.

5. Selected public educational projects on the desirability of and need for health maintenance examinations.

6. Evaluation of effectiveness of public educational activities.

7. Tumor registers collecting data of exceptional value.

8. Extension and evaluation of rehabilitation programs (in cooperation with state rehabilitation agencies).

9. Selected projects demonstrating effective treatment for cancer in public beneficiaries of medical care.

The types of projects suggested are not meant to exhaust all possibilities. Other worth while locally sponsored and locally directed demonstration projects will be considered on their own merits.

Applications are accepted from nonprofit organizations and institutions and official health agencies. The appropriate state health officer and Public Health Service regional medical director are first to review and process applications. The requests are then submitted to the Advisory Committee to the Cancer Control Program and the National Advisory Cancer Council for recommendation of approval or disapproval. Formal action on applications and recommendations is taken by the chief of the Bureau of State Services, to whom authority has been delegated by the Surgeon General.

Projects may be approved initially for as long as three years. When activities are proceeding satisfactorily and funds are available, assistance continues through the approved period. In special instances, assistance may include the assignment of personnel and the provision of equipment and supplies. Additional information and application forms may be obtained from the eight regional offices of the Public Health Service.

OTHERS ARE SAYING

The Challenge of the Rising Population

Medical practice with all its skills has done well by the community in the prolongation of life. The increasing population obviously indicates the need for a constantly increasing number of physicians. To whom shall we look for leadership in this growth in our ranks? Shall it be the medical schools? Shall it be our rising 18-year olds who will in some twenty short years be the leaders of the future? It will be at best a complex problem, but one in which each medical society on the local level must acknowledge some responsibility.

Before our students come to the medical school level they must make good at college. The United States Department of Education reports that there are a large number, some 25 per cent in the average freshman class, who join the sad stream of "drop-outs" before June . . . bitter, frustrated, and bewildered. There are many reasons why these

young people do not stick, and it is with these reasons that we physicians must come to grips. If we are to look to this pool of personnel for our replenishment we must know that the youngsters matriculating have shown a gradually increasing I.Q. in the past 10 years as measured by college entrance examinations. Educators have come to the conclusion that the source of the trouble is psychological. We, therefore, cannot dismiss this matter in an off-hand manner as if we had poorer material with which to work.

In the various avenues of our contacts with people in the home, the P.-T.A., young people's groups, or in our office practice, we can be a force for good by advising parents and youngsters alike that the problem is remedial. Aside from financial problems and aside from the problem of the girl who dropped out because of marriage, there still remains a group of unmotivated students who have been insufficiently prepared in high school. Whatever may be laid at the door of the school may be charged up to the home even more certainly.

There is often the case of too much spoon-feeding and of having too much done at home before arrival at college. Overprotection at home, as well as family insistence on a distasteful career to the student, soon lets our hoped for recruit bog down in the midst of his college years. The newness of being away from home and making his own decisions calls for a measure of maturity and adjustability that parents must anticipate and offer training.

Social pressures at college may set up a competitive force against studies that develops anxiety and tension in the attempt to make good in both fields. We as physicians must take a more determined stand in advising our college population and their families in educational matters, particularly in the psychological area. We have an obligation to our profession, to our country and to our youth to make this fact known: that while the harshness of life has been mitigated, the need for learning the "skill to study" still is with us. If the practice of medicine is to keep pace with the rising population, we must have skilled and educated replacements in our ranks. We must encourage the pool of our 18-year olds to develop a dedicated and motivated attitude toward schooling. We must urge every boy and girl to continue in school, but more than this, to develop their God-given capacity to the fullest. The strength and numbers of our medical ranks can only be filled as our present 18-year olds make their finest contributions to the professional ranks of medicine.

Ben Glaser, M.D.
Quarterly Bulletin
Orange County Medical Society
April, May, June, 1959.

BLUE SHIELD

Service Benefits Approved for Federal Employees

The decision has been made. The members of the House of Delegates are to be commended for promptly diagnosing the necessity for a service benefit program of professional services for federal employees in Florida and their families, for making it possible for these employees to have a choice between Blue Shield–Blue Cross and the indemnity program to be offered through the insurance industry. Now it becomes the responsibility of doctors of medicine in the state to make certain that the voluntary way proves to be as efficient and effective as the profession has maintained that it would be, that it provides a quality of medical care possible only under freedom from strangling restrictions.

In view of the favorable action by the House of Delegates, the Board of Governors has requested Blue Shield to make available to federal employees in Florida service benefit contracts on the two levels of benefits required by law. One of these offerings is to provide full service benefits for covered expenses to families with annual incomes of $6,000, or under $4,000 for one person contracts. The lower level is to be based on a $4,000 family income, $3,000 for single persons. Professional fees for the respective levels of benefits are to be computed on the relative value schedule now being utilized for the Blue Shield 'A' contract, adjusted to the applicable income level.

To some there is the scent of victory in the air. It must be kept in mind, however, that this nip and tuck contest is by no means over. The proponents of voluntary measures for providing against the costs of illness will do well to remain alert for the next moves of the social planners in this national game or game of nationalization. Devotees of the pigskin pastime contend that it is difficult to gain yardage unless one retains possession of the ball. On other occasions the medical profession has found itself in position for

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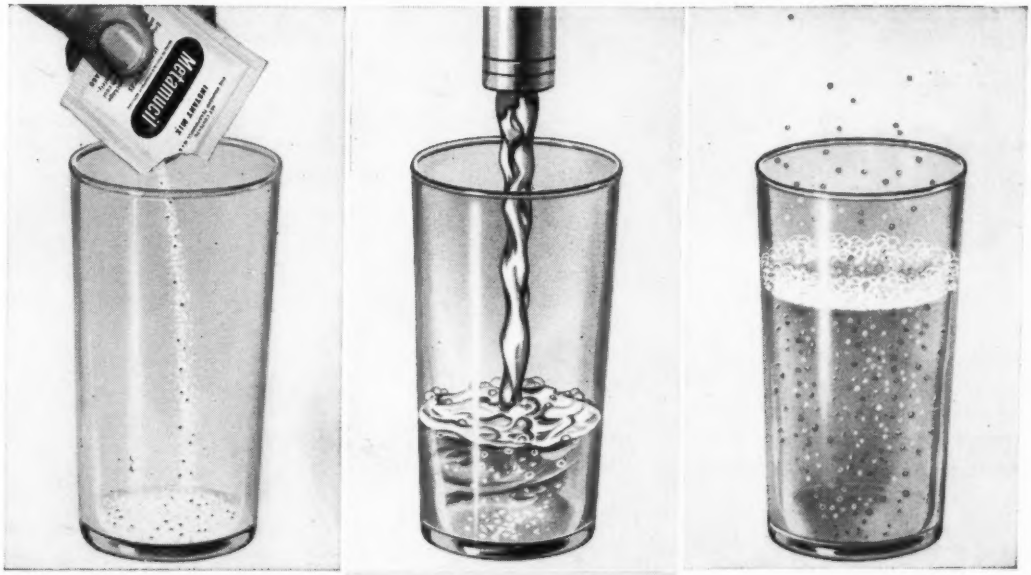

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an early score, suddenly only to have its ball carriers tackled behind the lines and its passes intercepted. Armchair quarterbacks have not hesitated to direct attention to inferior coaching, inexperienced quarterbacking, misinterpreted signals, and costly fumbles.

Uncle Sam has taken the medical profession at its collective word. He has acceded to its persistent predictions that a voluntary system will give better protection and provide higher quality medical care than any program of compulsion. Our esteemed Uncle has tossed the ball, but it is certain that he intends to see that the rules are enforced. It can be expected that he will make every effort to be reasonable and fair, but we also know that he can be a tough official. If it becomes necessary, he will not hesitate to invoke penalties, or even to declare the game forfeited. Fumbles and foul play are likely to prove fatal.

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STATE NEWS ITEMS

Dr. Leo M. Wachtel of Jacksonville, President-Elect of the Florida Medical Association, was principal speaker at the meeting of Region Two, American Animal Hospital Association, in Jacksonville early in February. The title of Dr. Wachtel's address was "People Who Live in Glass Houses Shouldn't."

Dr. William R. Stinger of Tallahassee has been appointed Assistant Director of the Dade County Department of Public Health. He was formerly director of the Florida Crippled Children's Commission.

Dr. Louis M. Orr of Orlando, President of the American Medical Association; Dr. James N. Patterson of Tampa; Dr. Erasmus B. Hardee of Vero Beach; Dr. Homer L. Pearson Jr. of Miami, and Dr. George T. Harrell of Gainesville were among the physicians from Florida attending the recent Annual Congress on Medical Education and Licensure held in Chicago.

Dr. Richard V. Reiswig has been elected president of the Duval County Chapter of the Florida Academy of General Practice. Dr. A. MacKenzie Manson will serve as vice president, Dr. Anson J. Mellion as secretary-treasurer and Dr. Charles H. Burke as new director. All are from Jacksonville.

"Diagnostic Problems and Recent Advances in Cancer Therapy" was the principal scientific subject discussed at the fourth annual seminar of the Watson Clinic in Lakeland on March 5. Guest participants included Dr. Gould A. Andrews, Oak Ridge, Tenn.; Dr. William R. Arrowsmith, New Orleans; Dr. William W. Daniel, New York City; Dr. Lester R. Dragstedt, Gainesville; Dr. Joseph H. Pratt, Rochester, Minn., and Dr. Julian M. Ruffin, Durham, N. C.

Dr. William J. Knauer Jr. of Jacksonville presented his film entitled "Surgical Removal of a Dislocated Lens" at the recent Pan-American Association of Ophthalmology held in Caracas, Venezuela.

Dr. James N. Patterson of Tampa has been reappointed as chairman of the Committee on

Porphyrins of the American Society of Clinical Pathologists. Recently Dr. Patterson and Dr. Charles Catanzaro of Tampa, a member of the Committee, presented a two day Tutorial Workshop on Porphyrins for pathologists from surrounding states and from the North. One other Workshop is to be presented during April.

The fifth medical seminar cruise sponsored by Duke University School of Medicine will begin June 5 and terminate on June 28 in Hamburg, Germany. The cruise ship T. S. Ariadne may be boarded June 5 at Wilmington, N. C., or on June 8 at New York City. Points of interest will include the Baltic, Le Havre, Cruxhaven, Leningrad, Helsinki, Stockholm, Copenhagen and Hamburg. Shipboard lectures will be given on various subjects in medicine, pediatrics and thoracic surgery. Information on the cruise may be obtained from Dr. W. M. Nicholson, Professor of Medicine and Assistant Dean in Charge of Postgraduate Education, Duke University Medical Center, Durham.

Dr. Jere W. Annis of Lakeland, Immediate Past President of the Florida Medical Association, was one of the principal speakers at the recent Annual Conference of County Medical Society Presidents and Secretaries sponsored by the South Carolina Medical Association at Columbia.

The forty-fifth session of the Trudeau School of Tuberculosis and Other Pulmonary Diseases has been scheduled for June 6-24 at Saranac Lake, N. Y. All inquiries should be addressed to the secretary of the School, Box 500, Saranac Lake, N. Y.

Dr. Harry Prystowsky of Gainesville, Professor and Chairman of the Department of Obstetrics at the College of Medicine, University of Florida, has been selected by the United States Junior Chamber of Commerce as one of the ten outstanding young men in the nation.

Drs. Edward H. Williams and Samuel Gertman of Miami and Dr. H. Phillip Hampton of Tampa participated in the program of the Regional Conference on Aging, sponsored by the American Medical Association, in Atlanta March 7-8. Dr. Williams, a member of the Committee on Aging of the American Medical Association,

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discussed "Medicine's Blueprint for the New Era of Aging;" Dr. Gertman, chairman of the Committee on Aging of the Florida Medical Association, was a member of the panel on "Prevention in Meeting the Challenge," and Dr. Hampton, a member of the Committee on Indigent Care of the American Medical Association, discussed "The Community's Financial Responsibility."

Dr. Fernando Rubio Jr. of St. Petersburg and Dr. Philip B. Paty of Dunedin conducted the monthly clinico-pathology session of the Mease Clinic on February 26. The subject was myelomata.

Dr. William T. Williams of Dunedin participated in the program of the Twenty-Eighth Annual Assembly of the Southeastern Surgical Congress held March 21-24 in New Orleans. The opening day of the Assembly, Dr. Williams presented an address entitled "Gastrectomy in the Patient Over Sixty."

Physicians from Florida attending the Regional Conference on Aging sponsored by the American Medical Association in Atlanta March 7-8 included Dr. Reuben B. Chrisman Jr. of Coral Gables, member of the Council on Medical Service, American Medical Association; Dr. George W. Karelas of Newberry, chairman of the Subcommittee on Health and Medical Care, Governor's Citizens Advisory Committee on the Aged; Dr. Louis L. Amato of Fort Lauderdale, member of Committee on Aging, Florida Medical Association, and Dr. Howard W. Carter of St. Petersburg, Pinellas County Health Department.

Dr. John J. Fisher of Jacksonville has been elected president of the newly organized Jacksonville Obstetrical and Gynecological Society. Other officers include Dr. Richard W. McDowell, president-elect, and Dr. Doris N. Carson, secretary-treasurer. At the initial formal meeting of the Society late in February, Dr. Nickolson J. Eastman, Professor and Chairman of the Department of Obstetrics and Gynecology at the Johns Hopkins University School of Medicine, was guest speaker. His subject was the timing of repeat cesarean section.

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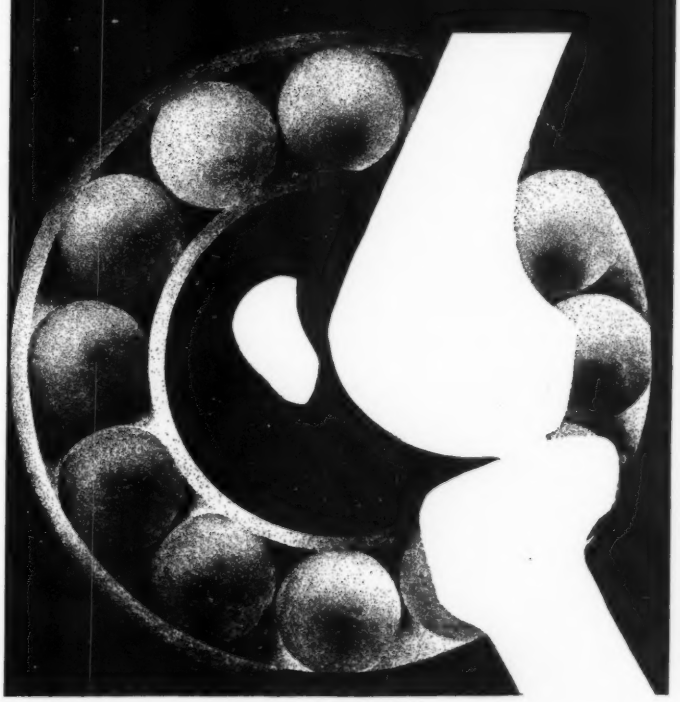

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COMPONENT SOCIETY NOTES

Dade

Lt. Gilbert J. Haas of the Miami Fire Department Rescue Squad was principal speaker at the March meeting of the Dade County Medical Association. As president of the Dade County Rescue Association, Lt. Haas presented information about this new group and explained the facilities of first aid and emergency units available to physicians.

Duval

A panel discussion entitled "From the Cradle to—" was the feature of the March meeting of the Duval County Medical Society. Members of the panel included Drs. Leslie R. Adams, William E. Faris, William M. Madison Jr., and James B. Strachan Jr., all of Jacksonville.

Hillsborough

Drs. John C. Fletcher and Lawrence Kahana of Tampa discussed "Medical and Surgical Aspects of Thyroid Disease," and Dr. Irving M. Essrig "Problems of Blue Shield" at the March meeting of the Hillsborough County Medical Association.

DeSoto-Hardee-Glades

Dr. James O. Ferguson of Sarasota was principal speaker at the March meeting of the DeSoto-Hardee-Glades County Medical Society held at Arcadia. Dr. Ferguson's subject was hiatus hernia.

Polk

Professor Kenneth L. Black of the University of Florida, Gainesville, discussed "Estate Planning" at the March meeting of the Polk County Medical Association held at Winter Haven.

BIRTHS AND DEATHS

Births

Dr. and Mrs. William M. Madison Jr. of Jacksonville announce the birth of a daughter, Margaret Stockton, on January 28, 1960.

Dr. and Mrs. Thomas H. Gouchnour of Jacksonville announce the birth of a daughter, Carolyn Elsie, on January 22, 1960.

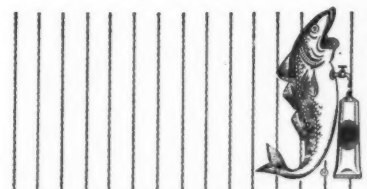
Deaths — Members

Alexander, Morris James, Punta Gorda....October 28, 1959
Davis, Julius C., Quincy.....February 26, 1960

Deaths — Other Doctors

Cohen, Harry M., Miami Beach.....October 30, 1959
Hicks, Joseph H., Gainesville.....October 23, 1959
Quillian, Willard W., Neptune Beach....November 5, 1959

more than just vitamins A and D



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NEW MEMBERS

The following doctors have joined the State Association through their respective county medical societies.

Active

Ainslie, John D., Gainesville
Arnold, Gordon H., Bradenton
Beasley, Frank J., Ft. Lauderdale
Berkey, William E., Coral Gables
Blitch, Clifford G., Tallahassee
Brodsky, Leonard, Miami
Brody, Benjamin, Miami Beach
Cava, Edward E., Miami
Cooper, Thomas W., Lakeland
Ferguson, William H., Orlando
Gardner, Melvyn J., Tampa
Goulard, Alexander Jr., Ocala
Graybill, Robert E., Hollywood
Grenell, Walter B., Boca Raton
Harden, David L., Mulberry
Huckle, George T., Delray Beach
Jahn, Paul H., Winter Haven
Jordan, Steven E., Ft. Lauderdale
Klein, Robert E., Gainesville
Laurie, Robert E., Coral Gables
Longino, Grady E., Lakeland
McCoy, Donald L., Williston
Miller, George H., Jr., Winter Park
Newhall, Joseph F. P, Jr., Winter Park
Onkst, Harold R., Dunedin
Plummer, Richard W., Fort Myers
Rasmussen-Taxdal, David S., Lakeland
Regan, Peter F. III, Gainesville
Repp, Edward M., Miami
Roggenkamp, Milton W., Bradenton
Ryon, Alden B., Winter Haven
Salko, Edward W., Fort Myers
Simpson, Dazelle D., (col.), Miami
Stead, William W., Gainesville
Traggis, Demetrius G., Miami
Wachal, John H., Bunnell
Waid, Margaret E., Gainesville
Woodward, Edward R., Gainesville
Woolsey, R. Dean, Ft. Lauderdale

Associate

Ashcraft, John R., Ft. Lauderdale
Bloom, John D., Ft. Lauderdale
Braman, Robert T., Ft. Lauderdale
Bullington, Donald C., Hollywood
Clement, Baxter L., Ft. Lauderdale

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Graden, Earl A., Lake Worth
Haber, Mordecai, Ft. Lauderdale
Heffner, Ralph W., Ft. Lauderdale
Henderson, Neil C., Ft. Lauderdale
Hertner, John E., Ft. Lauderdale
Hoover, Robert T., Orlando
Ifft, Robert C., W. Palm Beach
Kemp, William L., Jr., W. Palm Beach
McFall, John S. R., Ft. Lauderdale
Marchetto, Louis J., Riviera Beach
Mimnagh, William P., Jr., Pompano Beach
Nitzberg, Saul S., Hollywood
Perry, James B., Pompano Beach
Robarge, Ignace J., Hollywood
Ross, Glenn V., Deerfield Beach
Santini, Gaetano, Ft. Lauderdale
Segal, Myron I., Hollywood
Seropian, Diran M., Ft. Lauderdale
Sindell, Harlan W., Hollywood
Tienstra, Joseph E., Deerfield Beach
Van Eldik, Dick L., Lake Worth
Wiswell, Orville O., Hollywood
Wright, Jack E., W. Palm Beach

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Louis S. Goldstein Clinical Medicine 59:455 (1952) / Kass Archives of Internal Medicine Vol. 100, p. 709.

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Vitamin C	50 mg.	Niacinamide	10 mg.
Vitamin A	4000 USP Units	Vitamin K (Menadione)	0.25 mg.
Vitamin D	400 USP Units	Rutin	10 mg.
Vitamin B-1	2 mg.	Sodium Molybdate	3 mg.
Vitamin B-2	2 mg.	Fluorine (Calcium Fluoride)	0.25 mg.
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OBITUARIES

Arthur Derby Draper

Dr. Arthur Derby Draper of Tampa died in a local hospital on Sept. 26, 1959. He was 85 years of age.

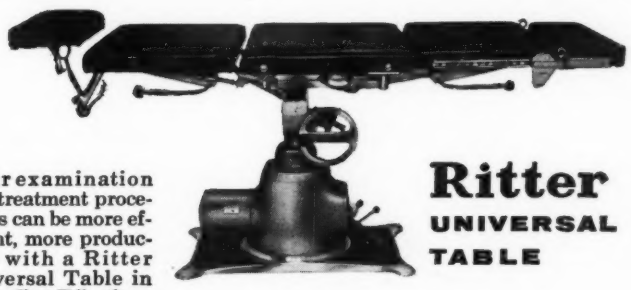
Born in Boston, Mass., on Aug. 30, 1874, Dr. Draper was the son of Fannie Victoria Jones Draper and Dr. Frank Winthrop Draper, a practicing physician of Boston and Professor of Legal Medicine at Harvard University, being the author of the text book used in that subject.

Dr. Draper received his medical training at Harvard Medical School, where he was awarded the degree of Doctor of Medicine in 1903. He was a member of the Boylston Society and served on the staff of the Boston City Hospital. He was also a member of the staff of the the Long Island Hospital and Assistant Superintendent of Isolation Hospital in New Jersey.

In 1910, after having practiced in Waltham, Mass., for several years, he moved to the Isle of Pines, where for years he was the only American physician on the island to be qualified by Havana University. In 1912, he was married to Louise Matschke, and three children were born to them on the Isle of Pines. Seeking adequate schooling for their children, they returned to the United States in 1923 and located in Tampa, where the youngest son, Arthur Jr., was born. Dr. Draper engaged in the general practice of medicine in Tampa for 33 years, retiring in December 1956. Locally, he served on the staff of St. Joseph's Hospital and the Tampa General Hospital. For many years he was a member, senior warden and vestryman of St. Andrew's Episcopal Church.

Dr. Draper was a member of the Hillsborough County Medical Association, and for 30 years had been a member of the Florida Medical Association. He also held membership in the American Medical Association and the Southern Medical Association.

Surviving are the widow, Mrs. Louise Draper, of Tampa; a daughter, Mrs. Ruth D. Hoover, of Havana; and two sons, Major Frank W. Draper, of Hickam Air Force Base, Hawaii, and Dr. Arthur D. Draper Jr., of MacDill Air Force Base, Tampa; and four grandchildren.



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in the Therapy of PNEUMONIA

Preferably, antibiotic therapy should be based on pretreatment culture of the offending pathogen, but in bacterial pneumonia the problem may well be too pressing to permit the required delay of 24 to 48 hours. A differential diagnosis among bacterial pneumonias, based on such clinical grounds as speed of onset, sepsis and pain may guide the choice of antibiotic for initiation of therapy.

Should clinical judgment dictate that antibiotic therapy be started immediately, at the same time a sputum sample or a subglottic swab can be sent to the laboratory for culture and sensitivity studies. If the response to the first antimicrobial agent proves unsatisfactory, a reasonable basis for changing therapy will then be at hand.

Choosing the Antibiotic

Since therapy must be started at once for bacterial pneumonia, it is advisable to choose a broad-spectrum antibiotic that quickly produces high levels of active agent (e.g., tetracycline phosphate complex, TETREX). Such an antibiotic probably has the best chance of controlling the pathogen, whether it be gram-negative or gram-positive. And if the laboratory report shows that the invading organism is much less sensitive to tetracycline than to other agents, the patient can then be changed to an appropriate antibiotic. If the difference in sensitivity is slight, then the possibility of side effects, sensitization, and toxicity should be evaluated before changing therapy to another antibiotic.

The greatest number of bacterial pneumonias are caused by pneumococci, which respond very well to penicillin, tetracycline, and chloramphenicol. Also, these antibiotics are usually effective against the other gram-positive coccal pneumonias. But penicillin is ineffective against the viral pneumonias and the gram-negative *Hemophilus influenzae* and *Klebsiella pneumoniae*. Although *K. pneumoniae* causes only about 1 to 2 per cent of pneumonia cases on the average,[1] these are apt to be acute and fulminating (Friedländer's pneumonia), with a high mortality rate if not effectively treated. Since pneumococcal pneumonia may be difficult to distinguish clinically from Friedländer's, except by gram-stained sputum smear, it may be wiser to start treatment with an agent also effective against Klebsiella.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey[2] it was found that penicillin produced severe skin reaction. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

Tetracycline is also clinically effective in primary atypical pneumonia.[3]

The tetracyclines (e.g., TETREX) have the advantage of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

No one would deny that appropriate antibiotic therapy has greatly reduced morbidity and saved many lives of patients with bacterial pneumonia. Nevertheless, general supportive measures in the care of patients remain important even today. Especially in the desperately ill patient, antibiotics are not considered as substitutes for the individual evaluation, clinical observation and judgment of the physician.

Some Micro-organisms Susceptible[a] to Tetracycline **(TETREX)[b]**

Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; *C. diphtheriae; B. anthracis; E. coli;* Proteus; *A. aerogenes; Ps. aeruginosa; K. pneumoniae;* Shigella; Brucella; *P. tularensis; H. influenzae; T. pallidum;* Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; *E. histolytica; D. granulomatosis.*

a Some strains are not susceptible.

b Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics. 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

References: 1. Wood, W. E., Jr.: In: A Textbook of Medicine. Edited by Cecil, R. L., and Loeb, R. F., 9th edition, Philadelphia, W. B. Saunders Co., 1955, p. 145. 2. Welch, H.; Lewis, C. H.; Weinstein, H. I., and Boeckman, B. B.: Severe reactions to antibiotics. A nationwide survey. Antibiotic Med. & Clin. Ther. 4:800 (Dec.) 1957. 3. Keefer, C. S.: The choice of an anti-infective agent. In: Drugs of Choice, 1958-1959. Edited by Walter Modell, St. Louis, The C. V. Mosby Co., 1958, p. 135.

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Acts safely—no psychotic reactions. Deprol does not cause hypotension, tachycardia, jitteriness, or liver toxicity. It can be safely administered with basic therapy.

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Dosage: One tablet one-half to one hour before each meal.

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BOOKS RECEIVED

Preventive Medicine. *Principles of Prevention in the Occurrence and Progression of Disease.* Edited by Herman E. Hilleboe, M.D., and Granville W. Larimore, M.D. Pp. 731. Illus. 59. Price, $12.00. Philadelphia, W. B. Saunders Company, 1959.

This book sets forth a new way to look at preventive medicine for medical students, general practitioners, specialists and professional workers in official and voluntary health agencies. As its main theme the book distinguishes between two clearly defined areas: (1) the prevention of occurrence of disease and disability, and (2) the prevention of their progression after contraction. The editors stress the role of the individual practicing physician in preventive medicine and emphasize throwing up barriers to disease before its onset. They are joined by 29 other staff members of the New York State Health Department in presenting material from lectures, seminars and articles by these experts in preventive medicine and public health. Their training and experience cover a broad spectrum of medical service, teaching and research, and their purpose is to outline a practical guide to physicians who are willing to incorporate preventive medicine as an integral part of their day to day practice in the office, in the hospital, in the home and in the community in which they live. There are chapters on control of environmental factors, prophylactic measures against disease, elimination of predisease conditions, prevention of progression of disease, rehabilitation, alcoholism, and narcotic addiction. Supporting services such as patient education, public health nursing, and the role of the hospital in disease prevention are discussed as they apply to the over-all picture of preventive medicine. To the general practitioner, school and public health physicians and medical students this book offers a new, sensible, and usable approach to the prevention and control of disease.

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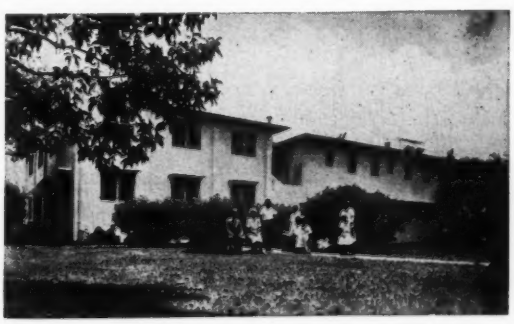
ORGANIZATION	PRESIDENT	SECRETARY	ANNUAL MEETING
orida Medical Association	Ralph W. Jack, Miami	Samuel M. Day, Jacksonville	Jacksonville, April 8-11, '60
orida Specialty Societies			
ademy of General Practice	Walter J. Glenn Jr., Ft. Lauderdale	A. MacKenzie Manson, Jacks'ville	Jacksonville, April 10, '60
ergy Society	James H. Putman, Miami	Ben A. Johnson Jr., Jacksonville	" " " "
esthesiologists, Soc. of	George C. Austin, Miami	George H. Mix, Lakeland	" " " "
est Phys. Am. Coll., Fla. Chap.	M. Eugene Flipse, Miami	Charles F. Tate Jr., Miami	" " " "
rmatology, Soc. of	Bruce M. Esplin, Miami	Jack H. Bowen, Jacksonville	" " " "
alth Officers' Society	Chester L. Nayfield, Winter Haven	L. L. Parks, Jacksonville	" " " "
dustrial and Railway Surgeons	Lloyd J. Netto, W. Palm Beach	John H. Mitchell, Jacksonville	" " " "
ternal Medicine	Lawrence E. Geeslin, Jacksonville	Charles K. Donegan, St. Petersburg	
urosurgical Society	W. Tracy Haverfield, Miami	Edward J. Sullivan Jr., Jack'ville	" " " "
, and Gynec. Society	Homer L. Pearson, Jr., Miami	Sam W. Denham, Jacksonville	" " " "
hthal. & Otol., Soc. of	G. Dekle Taylor, Jacksonville	Joseph W. Taylor Jr., Tampa	" " " "
thopedic Society	Elwin G. Neal, Miami Shores	Richard A. Worsham, Jacksonville	" " " "
thologists, Society of	James B. Leonard, Clearwater	John A. Shively, Bradenton	" " " "
diatric Society	Harry M. Edwards, Ocala	John H. Cordes Jr., St. Petersburg	" " " "
stic & Reconstructive Surgery	Clifford C. Snyder, Miami	Bernard L.N. Morgan, Jacksonville	" " " "
toctologic Society	Don C. Robertson, Orlando	Matthew A. Larkin, Miami	" " " "
ychiatric Society	Samuel R. Warson, Sarasota	Merton L. Ekwall, Jacksonville	" " " "
diological Society	Russell D. D. Hoover, W. P. Bch.	John P. Ferrell, St. Petersburg	" " " "
rgeons, Am. Coll., Fla. Chapter	George W. Morse, Pensacola	C. Frank Chunn, Tampa	" " " "
rgeons, General, Fla. Assn.	C. Burling Roesch, Jacksonville	Thad Moseley, Jacksonville	" " " "
ological Society	Edwin W. Brown, W. Palm Beach	Wm. A. VanNortwick, Jacksonville	" " " "
orida—			
sic Science Exam. Board	P. A. Vestal, Winter Park	M. W. Emmel, Gainesville	Miami, June 4, 1960
od Banks, Association	Leo L. Foster, Tallahassee	Wilma Holt, Pensacola	Clearwater, May 13-15, '60
ue Cross of Florida, Inc.	Mr. C. DeWitt Miller, Orlando	Mr. H. A. Schroder, Jacksonville	
ue Shield of Florida, Inc.	Russell B. Carson, Ft. Lauderdale	John T. Stage, Jacksonville	Jacksonville, April 8, '60
ncer Council	Joseph J. Zavertnik, Miami	Lorenzo L. Parks, Jacksonville	" " " "
abetes Association	Grover C. Collins, Palatka	George F. Schmidt Jr., Miami	Miami Beach, Oct., 1960
ental Society, State	A. D. Farver, Miami Beach	Richard Chace, Orlando	Miami Bch., May 15-18, '60
art Association	Sidney Davidson, Lake Worth	Mrs. E. D. Pearce, Miami	Miami, April 30, '60
spital Association	Ted L. Jacobsen, Clearwater	Joseph F. McAloon, Hollywood	
edical Examining Board	Madison R. Pope, Plant City	Homer L. Pearson Jr., Miami	Miami Beach, June 19-21, '60
rses Association, State	Mrs. Idalyne Lawhon, Tampa	Mrs. Maurine Finney, Miami	
armaceutical Assn., State	Rufus Thomas, New Smyrna Bch	Mr. R. Q. Richards, Fort Myers	Tampa, May 15-18, '60
blic Health Association	A. Y. Covington, Starke	N. J. Schneider, Jacksonville	
udeau Society	Charles F. Tate Jr., Miami	Allen Y. DeLaney, Gainesville	Tampa, April 22-23, '60
berculosis & Health Assn.	Ernest A. Lilley, Lakeland	Mrs. R. H. McIntosh, Port St. Joe	" " " " "
oman's Auxiliary	Mrs. W. J. Newcomb, Pensacola	Mrs. Max Suter, Jacksonville	Jacksonville, Apr. 8-11, '60
nerican Medical Association	Louis M. Orr, Orlando	F. J. L. Blasingame, Chicago	Miami Beach, June 13-17, '60
A.M.A. Clinical Session			Wash., D. C., Nov. 28-Dec. 2, '60
uthern Medical Association	Milford O. Rouse, Dallas, Texas	Merle D. Thomas, El Paso	El Paso, Texas, Oct. 20-22, '60
abama Medical Association	William R. Carter, Repton, Ala.	Douglas L. Cannon, Montgomery	Mobile, Ala., April 21-23, '60
orgia, Medical Assn. of	Luther H. Wolff, Columbus, Ga.	Chris J. McLoughlin, Atlanta	Columbus, Ga., May 1-4, '60
. Chap. Arthritis & Rheuma-			
tism Foundation	John P. Mozur, Miami	J. Charles McKee Jr., Miami	Miami Beach, May 3-7, '60
E. Hospital Conference	Oscar S. Hilliard, Ft. Oglethorpe, Ga.	Glenn Hogan, Atlanta	
E. Am. Urological Assn.	N. Lewis Bosworth, Lexington, Ky.	J. L. Campbell, Orlando	Hollywood, 1961
utheastern Surgical Congress	M. M. Copeland, Washington, D.C.	B. T. Beasley, Atlanta	



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DeSoto-Hardee-Glades	Harold S. Agnew, Arcadia	Elmer J. Schmierer, Arcadia	1st Tues.	13
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